

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	4777	(544/405 or 546/276.7 or 548/428 or 514/255.05 or 514/339 or 514/411).ccls.	US-PGPUB; USPAT	OR	ON	2007/11/29 15:16
L2	236	l1 and muscarinic	US-PGPUB; USPAT	OR	ON	2007/11/29 15:16

=> d his

(FILE 'HOME' ENTERED AT 13:41:00 ON 29 NOV 2007)

FILE 'REGISTRY' ENTERED AT 13:41:10 ON 29 NOV 2007

L1 STRUCTURE UPLOADED

L2 0 S L1

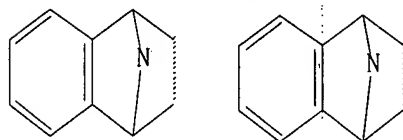
L3 60 S L1 FULL

FILE 'CAPLUS' ENTERED AT 13:41:40 ON 29 NOV 2007

L4 23 S L3

=> d que l4 stat

L1 STR



Structure attributes must be viewed using STN Express query preparation.

L3 60 SEA FILE=REGISTRY SSS FUL L1

L4 23 SEA FILE=CAPLUS ABB=ON PLU=ON L3

=> d 1-23 ibib iabs hitstr

L4 ANSWER 1 OF 23 CAPLUS COPYRIGHT 2007 ACS ON STN

ACCESSION NUMBER: 2006:589519 CAPLUS

DOCUMENT NUMBER: 145:220446

TITLE: A new class of laser dyes, 2-oxa-bicyclo[3.3.0]octa-4,8-diene-3,6-diones, with unity fluorescence yield

AUTHOR(S): Wang, Chao-Yu; Yeh, Yu-Shan; Li, Elise Y.; Liu, Yi-Ming; Peng, Shih-Ming; Liu, Shih-Tzung; Chou, Pi-Tai

CORPORATE SOURCE: Department of Chemistry and Instrumentation Center, National Taiwan University, Taipei, 106, Taiwan

SOURCE: Chemical Communications (Cambridge, United Kingdom) (2006), (25), 2693-2695

CODEN: CHCOFS; ISSN: 1359-7345

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 145:220446

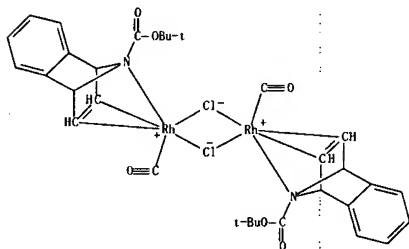
ABSTRACT: A new class of highly fluorescent dyes, 4,8-diphenyl-2-oxa-bicyclo[3.3.0]octa-4,8-diene-3,6-diones (1a-c), were synthesized. They all exhibit unity fluorescence quantum yield and short radiative lifetime (< 4 ns) in common organic solvents and demonstrated remarkable amplified spontaneous emission with a gain efficiency of > 10.

IT 898258-61-2

RL: CAT (Catalyst use): USES (Uses)
(new class of laser dyes, 2-oxa-bicyclo[3.3.0]octa-4,8-diene-3,6-diones, with unity fluorescence yield)

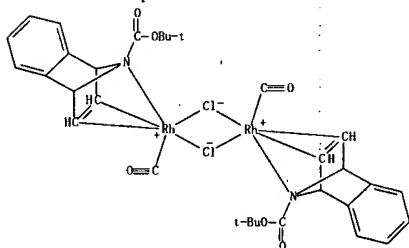
RN 898258-61-2 CAPLUS

CN Rhodium, dicarbonyl-di-μ-chlorobis[(2,3-η)-1,1-dimethylethyl 1,4-dihydronaphthalen-1,4-imine-9-carboxylate-κN9]di-, stereoisomer (9C1) (CA INDEX NAME)



REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 23 CAPLUS COPYRIGHT 2007 ACS ON STN (Continued)



REFERENCE COUNT: 69 THERE ARE 69 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 23 CAPLUS COPYRIGHT 2007 ACS ON STN

ACCESSION NUMBER: 2006:427347 CAPLUS

DOCUMENT NUMBER: 145:188529

TITLE: Rhodium-Catalyzed Ring-Opening Reactions of N-Boc-Azabenzonorbornadienes with Amine Nucleophiles

AUTHOR(S): Cho, Yong-hwan; Zunic, Valentin; Senboku, Hisanori; Olsen, Madeline; Lautens, Mark

CORPORATE SOURCE: Davenport Laboratories, Department of Chemistry, University of Toronto, Toronto, ON, M5S 3H6, Can.

SOURCE: Journal of the American Chemical Society (2006), 128(21), 6837-6846

CODEN: JACSAT; ISSN: 0002-7863

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 145:188529

ABSTRACT: In the presence of a rhodium catalyst (5 mol %) generated in situ from [Rh(cod)Cl]₂ and (S,S')-(R,R')-C₂-ferriphos, the asym. ring-opening reaction of azabenzonorbornadienes with various aliphatic and aromatic amines proceeded with high enantioselectivity (> 95% ee) to give 1,2-dihydronaphthalen-1,2-diamines in high yields. In the specific case of pyrrolidine as nucleophile, Et₃NHCl was necessary as an additive for good reactivity and enantioselectivity. Addnl., a practical protocol was developed for the ring-opening of N-tert.-butoxycarbonyl-7-azabenzonorbornadiene with volatile amines at elevated temps. and standard pressure, using R₂NH.HI and (Me₂CH)₂NEt. The exptl. results showed that the nature of the chiral ligand has the significant impact on the reactivity of the catalyst and the use of excess amount (2.2 equiv to Rh) of the chiral ligand plays an important role to improve the enantioselectivity in the present asym. reaction.

IT 898258-61-2P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(crystal structure of a rhodium complex which may be an intermediate in the stereoselective and enantioselective rhodium-catalyzed ring opening of N-Boc-azabenzonorbornadienes with amines)

RN 898258-61-2 CAPLUS

CN Rhodium, dicarbonyl-di-μ-chlorobis[(2,3-η)-1,1-dimethylethyl 1,4-dihydronaphthalen-1,4-imine-9-carboxylate-κN9]di-, stereoisomer (9C1) (CA INDEX NAME)

L4 ANSWER 3 OF 23 CAPLUS COPYRIGHT 2007 ACS ON STN

ACCESSION NUMBER: 2005:1103428 CAPLUS

DOCUMENT NUMBER: 143:386757

TITLE: Preparation of arylcyclohexyl amides and ureas as M3 muscarinic acetylcholine receptor antagonists

INVENTOR(S): Busch-Petersen, Jakob; Cooper, Anthony W. J.; Laine, Dramane I.; Palovich, Michael R.; Wan, Zehong; Yan, Hongxing; Zhu, Chongjie

PATENT ASSIGNEE(S): Glaxo Group Limited, UK

SOURCE: PCT Int. Appl., 79 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

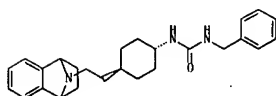
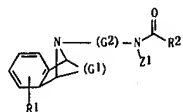
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005094251	A2	20051013	WO 2004-US8025	20040317
WO 2005094251	A3	20060330		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SI, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AW, AZ, BY, BG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1725238	A2	20061129	EP 2004-821844	20040317
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LI, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, LT, LV				
JP 2007529511	T	20071025	JP 2007-503875	20040317
US 2007185148	A1	20070809	US 2006-598885	20060914
PRIORITY APPL. INFO.: MARPAT 143:386757				
OTHER SOURCE(S):				
GRAPHIC IMAGE:				

L4 ANSWER 3 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



ABSTRACT:

Title compds. I [Z1 = H or alkyl; R1 = H, halo, C(0)aryl, etc.; G1 = CH2CH2 or CH=CH; G2 = alkyl or substituted cyclohexyl; R2 = XAr, XAr1Ar2 or NR32(Ar)n; X = bond, NR3 or alkyl; R3 = H (unsubstituted alkyl) or alkylaryl; Z = (un)substituted alkyl or alkyl-Y2 or 2 and R3 or 2 and Ar may form 4-7 membered ring; Ar = (un)substituted aryl, aromatic heterocycle, heterobicyclic ring system, etc.; Ar1 and Ar2 independently = (un)substituted Ph or aromatic heterocycle; Y = bond, NHCO, CONH, etc.; Y2 = NR3, O, S, etc.; n = 0-3] and their pharmaceutically acceptable salts, are prepared and disclosed as antagonists of M3 muscarinic acetylcholine receptors. Thus, e.g., I was prepared by coupling of 1,2,3,4-tetrahydro-1,4-epistano-naphthalene with [4-(2-oxoethyl)-cyclohexyl]-carbamic acid tert-Bu ester followed by deprotection and subsequent benzylation using benzyl isocyanate. The inhibitory activity of I was evaluated using receptor-activated calcium mobilization assay (no data). I as antagonist of M3 muscarinic acetylcholine receptor should prove useful in the treatment of chronic obstructive lung disease, chronic bronchitis and asthma. Pharmaceutical compds. comprising I are disclosed.

IT 866565-80-2P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

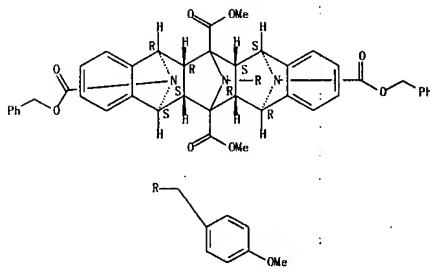
(preparation of arylcyclohexyl amides and ureas as M3 muscarinic acetylcholine receptor antagonists)

RN 866565-80-2 CAPLUS

CN Urea, N,N'-bis[trans-4-[2-(1,2,3,4-tetrahydronaphthalen-1,4-imin-9-yl)ethyl]cyclohexyl]- (9C1) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L4 ANSWER 4 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



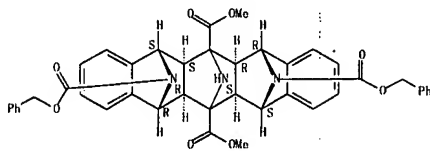
IT 336611-53-1P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of NH-tridentates via deprotection of N-protected NH-tridentates)

RN 336611-53-1 CAPLUS

CN Pentacene-5,14:6,13:7,12-triimine-6,13,15,17-tetracarboxylic acid, 5,5a,6a,7,12,12a,13a,14-octahydro-6,13-dimethyl 15,17-bis(phenylmethyl) ester, (5a,5aP,6a,6aP,7a,12a,12aP,13a,13aP,14a)- (9C1) (CA INDEX NAME)

Relative stereochemistry.



REFERENCE COUNT:

14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:618315 CAPLUS

DOCUMENT NUMBER: 144:311929

TITLE: Current status of synthesis of deprotected tridentates by substituent variations of aza-ACE reaction
Margetic, Davor; Butler, Douglas N.; Warrenner, Ronald N.

AUTHOR(S):

CORPORATE SOURCE: Centre for Molecular Architecture, Central Queensland University, Rockhampton, Queensland, 4702, Australia
SOURCE: International Electronic Conferences on Synthetic Organic Chemistry, 5th, 6th, Sept. 1-30, 2001 and 2002 [and] 7th, 8th, Nov. 1-30, 2003 and 2004 (2004), 843-852. Editor(s): Seijas, Julio A. Molecular Diversity Preservation International: Basel, Switz. CODEN: 69GTCD

DOCUMENT TYPE:

LANGUAGE: Conference; (computer optical disk)

OTHER SOURCE(S):

CASREACT 144:311929

ABSTRACT:

A procedure for deprotection of N-protected NH-tridentates is reported. Several N-protected tridentates were deprotected using TFA, ionic hydrogenation, or catalytic hydrogenation, to give the NH-tridentates.

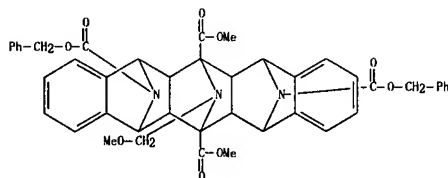
IT 880097-27-8 880097-28-9

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of NH-tridentates via deprotection of N-protected NH-tridentates)

RN 880097-27-8 CAPLUS

CN Pentacene-5,14:6,13:7,12-triimine-6,13,15,17-tetracarboxylic acid, 5,5a,6a,7,12,12a,13a,14-octahydro-16-(methoxymethyl)-, 6,13-dimethyl 15,17-bis(phenylmethyl) ester, (5a,5aP,6a,6aP,7a,12a,12aP,13a,13aP,14a)- (9C1) (CA INDEX NAME)



RN 880097-28-9 CAPLUS

CN Pentacene-5,14:6,13:7,12-triimine-6,13,15,17-tetracarboxylic acid, 5,5a,6a,7,12,12a,13a,14-octahydro-16-[(4-methoxyphenyl)methyl]-, 6,13-dimethyl 15,17-bis(phenylmethyl) ester, (5a,5aP,6a,6aP,7a,12a,12aP,13a,13aP,14a)- (9C1) (CA INDEX NAME)

Relative stereochemistry.

L4 ANSWER 5 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:134424 CAPLUS

DOCUMENT NUMBER: 142:392314

TITLE: The Pyrrole Approach toward the Synthesis of Fully Functionalized Cup-Shaped Molecules
Zonta, Cristiano; Fabris, Fabrizio; De Lucchi, Ottorino

AUTHOR(S):

CORPORATE SOURCE: Dipartimento di Chimica, Universita Ca' Foscari di Venezia, Venice, I-30123, Italy
SOURCE: Organic Letters (2005), 7(6), 1003-1006

CODEN: ORLEF7

ISSN: 1523-7060

PUBLISHER:

DOCUMENT TYPE:

LANGUAGE:

OTHER SOURCE(S):

CASREACT 142:392314

ABSTRACT:

A novel method for the synthesis of new highly functionalized cyclotrimers is described. The method consists of an original synthesis of p-dibromopyrroles, metalation, cyclodimerization, and cyclotrimerization. The sequence is highly compatible with common functional groups and allows the construction of cup-shaped mols. functionalized both at the upper and bottom rim. This feature makes the newly formed structures useful scaffolds for the development of supramol. receptors.

IT 849939-32-8P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation of cyclotrimers of azabicycloheptenes from pyrrole)

RN 849939-32-8 CAPLUS

CN Trinaphthylene-5,18:6,11:12,17-triimine, 5,6,11,12,17,18-hexahydro-19,20,21-tris[(4-methylphenyl)sulfonyl]-, (5R,6R,11R,12R,17R,18R)-rel- (9C1) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 849939-29-3P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of cyclotrimers of azabicycloheptenes from pyrrole)

RN 849939-29-3 CAPLUS

CN Trinaphthylene-5,18:6,11:12,17-triimine, 5,6,11,12,17,18-hexahydro-19,20,21-tris[(4-methylphenyl)sulfonyl]-, (5R,6S,11R,12S,17R,18R)-rel- (9C1) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2004:902087 CAPLUS
 DOCUMENT NUMBER: 141:379801
 TITLE: A preparation of naphthalele-1,4-imine derivatives, useful as M3 muscarinic acetylcholine receptor antagonists
 INVENTOR(S): Busch-Petersen, Jakob; Laine, Dramane I.; Palovich, Michael R.; McClelland, Brent W.
 PATENT ASSIGNEE(S): Glaxo Group Limited, UK
 SOURCE: PCT Int. Appl., 24 pp. CODEN: P1XX02
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004091482	A2	20041028	WO 2004-US10641	20040407
WO 2004091482	A3	20041223		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, ME, MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SV, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, CA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
WO 2005090407	A1	20051013	WO 2004-US8027	20040317
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, ME, MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SV, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, CA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
WO 2005094835	A1	20051013	WO 2004-US8032	20040317
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, ME, MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SV, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, CA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
EP 1725564	A1	20061129	EP 2004-821846	20040317
R:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LI, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, LT, LV			
EP 1725241	A1	20061129	EP 2004-821848	20040317
R:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LI, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, LT, LV			

L4 ANSWER 6 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
 JP 2007529513 T 20071025 JP 2007-503877 20040317
 JP 2007529514 T 20071025 JP 2007-503878 20040317
 EP 1613307 A2 20060111 EP 2004-749817 20040407
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR
 JP 2006522161 T 20060928 JP 2006-509761 20040407
 US 7232841 A1 20060921 US 2005-552492 20051007
 US 2007149598 B2 20070619
 US 2007149598 A1 20070628 US 2006-598882 20060914
 US 2007185088 A1 20070809 US 2006-598888 20060914
 PRIORITY APPL. INFO.: US 2003-460860P P 20030407
 WO 2004-US8027 W 20040317
 WO 2004-US10641 W 20040407

OTHER SOURCE(S): MARPAT 141:379801
 GRAPHIC IMAGE:

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

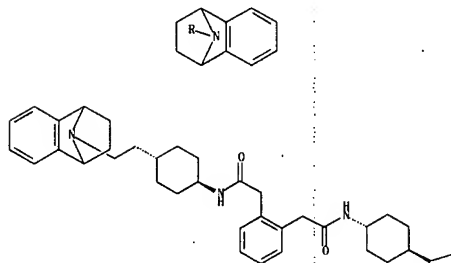
ABSTRACT:
 The invention relates to a preparation of novel naphthalele-1,4-imine derivs. of formula I (wherein: R is H, halogen, alkyl, alkanoyl, or aryl; Y is alkyl, (CH₂)₂-(cyclohex-1,4-diyl), or CH₂-(cyclohex-1,4-diyl)-CH₂, etc.; Z is (CH₂)₂ or CH; X is -O-Ar-Q- or -Q-L-Q-; Q is a bond, alkyl, or O-alkyl, etc.; Ar is (un)substituted Ph or 5-6-membered aromatic heterocyclic ring; L is a bond or (cyclo)alkyl), useful for the treatment of M3 muscarinic receptor antagonists (no biol. data). For instance, naphthalele-1,4-imine derivative II was prepared via anisolation of 1,2-benzenediacetic acid by cyclohexylamine derivative III with a yield of 18% (example 1).

IT 781665-82-SP 781665-85-SP 781665-86-9P
 781665-87-OP
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (Preparation of naphthalele-1,4-imine derivs., useful as M3 muscarinic acetylcholine receptor antagonists)
 RN 781665-82-5 CAPLUS
 CN 1,2-benzenediacetamide, N,N'-bis[trans-4-[2-(1,2,3,4-tetrahydronaphthalen-1,4-imin-9-yl)ethyl]cyclohexyl]- (9CI) (CA INDEX NAME)

Relative stereochemistry.

L4 ANSWER 6 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A

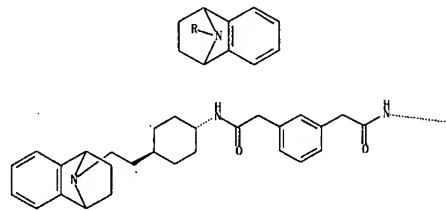


PAGE 1-B

RN 781665-85-8 CAPLUS
 CN 1,3-benzenediacetamide, N,N'-bis[trans-4-[2-(1,2,3,4-tetrahydronaphthalen-1,4-imin-9-yl)ethyl]cyclohexyl]- (9CI) (CA INDEX NAME)
 Relative stereochemistry.

L4 ANSWER 6 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A

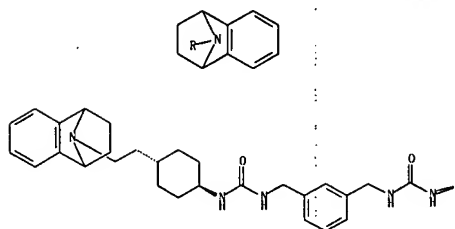


PAGE 1-B

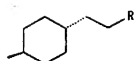
RN 781665-86-9 CAPLUS
 CN Urea, N,N'-[1,3-phenylenebis(methylene)]bis[N'-(trans-4-[2-(1,2,3,4-tetrahydronaphthalen-1,4-imin-9-yl)ethyl]cyclohexyl)- (9CI) (CA INDEX NAME)
 Relative stereochemistry.

L4 ANSWER 6 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A



PAGE 1-B

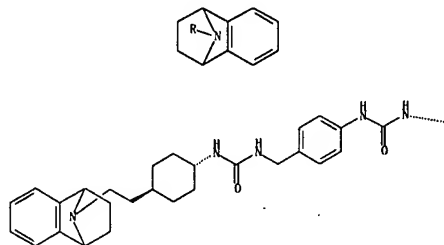


RN 781665-87-0 CAPLUS
 CN Urea, N,N'-[1,4-phenylenebis(methylene)]bis[N'-[trans-4-[2-(1,2,3,4-tetrahydronaphthalen-1,4-imin-9-yl)ethyl]cyclohexyl]- (9C1) (CA INDEX NAME)

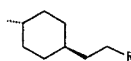
Relative stereochemistry.

L4 ANSWER 6 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A



PAGE 1-B



L4 ANSWER 7 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:630190 CAPLUS

DOCUMENT NUMBER: 136:53655

TITLE: Isoindole cycloadditions. Part III: the synthesis of "windscreen wiper" and other N-bridged cavity systems
 AUTHOR(S): Warren, Ronald N.; Malpass, John R.; Butler, Douglas N.; Sun, Guangxing

CORPORATE SOURCE: Centre for Molecular Architecture, Central Queensland University, Rockhampton, 4702, Australia
 SOURCE: Structural Chemistry (2001), 12(3/4), 291-304

CODEN: STCHES; ISSN: 1040-0400
 PUBLISHER: Kluwer Academic/Plenum Publishers

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 136:53655

ABSTRACT: The thermal addition of N-carbobenzoyloxyisoindole, generated by the reaction of 3,6-di(2-pyridyl)-s-tetrazine with N-benzoyloxycarbonyl-7-azabenzonorbornadiene, onto di-Me tricyclo[4.2.1.0.2,5]nona-3,7-diene-3,4-dicarboxylate (I) occurred site selectively at the cyclobutene π -bond to form a stereoisomeric mixture of 1:1-adducts, in which the bent-frame isomer was dominant (ratio 5:1). In contrast, N-benzyl-4,5,6,7-tetrafluoroisoindole reacted with I only under high-pressure conditions (14 kbar, RT, 4 days) to afford 1:1-adducts at the cyclobutene site, in which the extended-frame isomer was dominant and the accompanying bent-frame product reverted to starting materials soon after isolation. These same stereoselectivities were used to prepare a "windscreen wiper" compound, having two mobile benzyl substituents attached to a rigid scaffold, by the reaction of N-benzyltetrafluoroisoindole with tetra-Me tetracyclo[4.4.1.0.2,5.0.7,10]undeca-3,8-diene-3,4,7,8-tetracarboxylate. A cavity bis-(cyclobutene-1,2-diesters) was treated with N-benzyltetrafluoroisoindole twice over to produce a cavity structure with two O- and two N-benzyl bridges on the inner face, whereas the narrower cavity bis-alkene stopped at the 1:1-addition stage. The dynamics of the Z-group in the dual adducts are discussed briefly and key adducts and cavity systems have been structurally evaluated by X-ray crystallog., VT NMR, and mol. modeling.

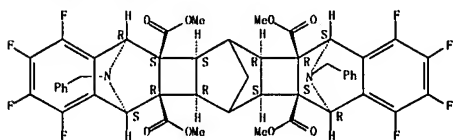
IT 208117-32-2P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (preparation of N-bridged cavity systems from isoindoles)

RN 208117-32-2 CAPLUS

CN 6,13-Methanobenzo[b]naphtho[2',3':3,4]cyclobuta[1,2-h]biphenylene-5,14:7,12-diimine-5a,6b,12a,13b-tetracarboxylic acid, 1,2,3,4,8,9,10,11-octafuoro-5,5b,6,6a,7,12,12b,13,13a,14-decahydro-, 5a,6b,12a,13b-tetramethyl-15,17-bis(phenylmethyl) ester, (5a,5a',5b,6a,6a',6b,6b',7a,7a',12a,12a',12b,12b',13a,13a',13b,14a)- (9C1) (CA INDEX NAME)

Relative stereochemistry.



IT 382629-93-8P 382629-94-9P 382629-95-0P

382629-95-1P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of N-bridged cavity systems from isoindoles)

RN 382629-93-8 CAPLUS

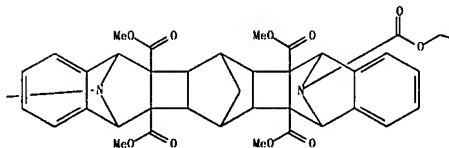
L4 ANSWER 7 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

CN 6,13-Methanobenzo[b]naphtho[2',3':3,4]cyclobuta[1,2-h]biphenylene-5,14:7,12-diimine-5a,6b,12a,13b,15,17-hexacarboxylic acid, 5,5b,6,6a,7,12,12b,13,13a,14-decahydro-, 5a,6b,12a,13b-tetramethyl-15,17-bis(phenylmethyl) ester, (5a,5a',5b,6a,6a',6b,6b',7a,7a',12a,12a',12b,12b',13a,13a',13b,14a)- (9C1) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



PAGE 1-C

Ph

RN 382629-94-9 CAPLUS

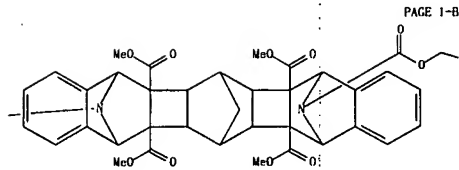
CN 6,13-Methanobenzo[b]naphtho[2',3':3,4]cyclobuta[1,2-h]biphenylene-5,14:7,12-diimine-5a,6b,12a,13b,15,17-hexacarboxylic acid, 5,5b,6,6a,7,12,12b,13,13a,14-decahydro-, 5a,6b,12a,13b-tetramethyl-15,17-bis(phenylmethyl) ester, (5a,5a',5b,6a,6a',6b,6b',7a,7a',12a,12a',12b,12b',13a,13a',13b,14a)- (9C1) (CA INDEX NAME)

L4 ANSWER 7 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A



PAGE 1-B



PAGE 1-C

Ph

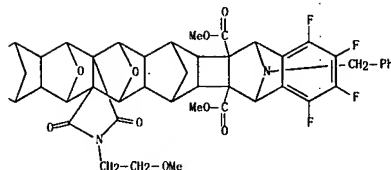
RN 382629-95-0 CAPLUS
 CN 6,13-Methanobenzo[b]naphtho[2',3':3,4]cyclobuta[1,2-h]biphenylene-5,14:7,12-dimine-5a,6b,12a,13b,15,17-hexacarboxylic acid, 5,5b,6,6a,7,12,12b,13,13a,14-decahydro-, 5a,6b,12a,13b-tetramethyl 15,17-bis(phenylmethyl) ester, (5a,5aβ,5b,6,6a,6aβ,6b,7a,12a,12aβ,12b,13b,13a,13aβ,14a)- (9C1) (CA INDEX NAME)

PAGE 1-A



L4 ANSWER 7 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

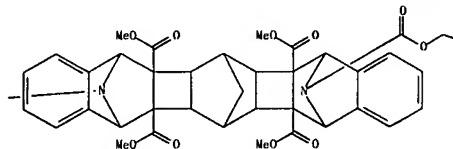
PAGE 1-B



REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L4 ANSWER 7 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-B

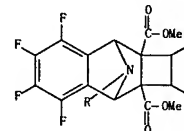


PAGE 1-C

Ph

RN 382629-96-1 CAPLUS
 CN 7,18:8,17-Diepoxy-7a,17a-(methaniminomethano)-6,19:9,16-dimethanobisnaphtho[2',3':3,4]cyclobuta[1,2-b:1',2'-k]naphthacene-5,20:10,15-dimine-5a,9b,15a,19b-tetracarboxylic acid, 1,2,3,4,11,12,13,14-octafluoro-5,5b,6,6a,7,8,8a,9,9a,10,15,15b,16,16a,17,18,18a,19,19a,20-icosahydro-25-(2-methoxyethyl)-24,20-dioxo-21,29-bis(phenylmethyl)-tetramethyl ester, (5a,5aβ,5b,6,6a,6aβ,6b,7a,7aβ,8a,8aβ,9a,9aβ,9b,10a,15a,15aβ,15b,16β,16aβ,17a,17aβ,18a,18aβ,19β,19aβ,19bβ,20a)- (9C1) (CA INDEX NAME)

PAGE 1-A



L4 ANSWER 8 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:126710 CAPLUS

DOCUMENT NUMBER: 134:326487

TITLE: Neighbouring group participation in N-methoxymethyl 7-azaborbornanes I: the synthesis of N,N'-methano-bridged diazasquinorbornanes, N3-[3]polynorbornanes and CN3-[4]polynorbornanes

AUTHOR(S): Warren, Ronald N.; Margetic, Davor; Butler, Douglas N.; Sun, Guangxing

CORPORATE SOURCE: Centre for Molecular Architecture, Central Queensland University, Rockhampton, 4702, Australia

SOURCE: Synlett (2001), (2), 202-205

CODEN: SYNLES; ISSN: 0936-5214

PUBLISHER: Georg Thieme Verlag

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 134:326487

ABSTRACT:

A new tandem route to N,N'-methano-bridged diazasquinorbornanes is reported in which 7-azaborbornanadines are reacted with ester-activated N-(methoxymethyl)aziridinocyclobutanes to form adducts which immediately undergo N,N'-methano-bridge formation by nucleophilic attack of the nitrogen lone pair of one N-bridge onto the methoxymethyl group attached to the adjacent N-bridge. Alternative routes to N,N'-methano-bridged structures of this type are discussed.

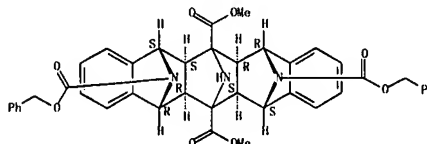
IT 336611-53-1P

RL: BYP (Byproduct); PREP (Preparation)
 (preparation of methanodiazasquinorbornanes and polynorbornanes)

RN 336611-53-1 CAPLUS

CN Pentacene-5,14:6,13:7,12-trisino-6,13,15,17-tetracarboxylic acid, 5,5a,6a,7,12,12a,13a,14-octahydro-, 6,13-dimethyl 15,17-bis(phenylmethyl) ester, (5a,5aβ,6a,6aβ,7a,12a,12aβ,13a,13aβ,14a)- (9C1) (CA INDEX NAME)

Relative stereochemistry.



IT 336611-52-0P

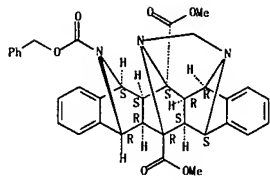
RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of methanodiazasquinorbornanes and polynorbornanes)

RN 336611-52-0 CAPLUS

CN 10,15-imino-5,9,16-methano-5H,7H-benz[fl]isoindolo[2',1':3,4]pyrimido[6,1-n]isoindole-9,15b,18-tricarboxylic acid, 9a,10,15,15a,16,16a-hexahydro-, 9,15b-dimethyl 18-(phenylmethyl) ester, (5R,9S,9aS,10S,15R,15aR,15bR,16S,16aS,17R)-rel- (9C1) (CA INDEX NAME)

Relative stereochemistry.

L4 ANSWER 8 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 9 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:126198 CAPLUS
 DOCUMENT NUMBER: 134:280665
 TITLE: Syn-Facial hetero-bridged [n]polynorbornanes: a new class of polarofacial framework molecules composed of fused 7-oxa- and 7-azanorbornanes
 AUTHOR(S): Warren, Ronald N.; Margetic, Davor; Foley, Patrick J.; Butler, Douglas N.; Winling, Alain; Beales, Kerry A.; Russell, Richard A.
 CORPORATE SOURCE: Centre for Molecular Architecture, Central Queensland University, Rockhampton, 4702, Australia
 SOURCE: Tetrahedron (2001), 57(3), 571-582
 CODEN: TETRAH; ISSN: 0040-4020
 PUBLISHER: Elsevier Science Ltd.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 134:280655
 ABSTRACT: New oxygen-bridged norbornane-fused cyclobutene epoxides and bis-(cyclobutene epoxides) are described and shown to react stereoselectively with 7-azanorbornanes to produce syn-facial N,O-bridged polynorbornanes and stereorandomly with 7-oxanorbornanes to produce O,O-bridged polynorbornanes as mixts. of syn-facial, and anti-facial products. Polarofacial systems containing up to six syn-facial norbornane bridges are described, while systems with seven co-facial oxygen atoms have been prepared by incorporating terminal epoxide rings to O5-[5]polynorbornanes. Ester-substituted 1,3,4-oxadiazoles are shown to be useful reagents for coupling 7-oxanorbornanes and produce predominantly syn-facial O-bridged polarofacial systems together with their anti-facial isomers.

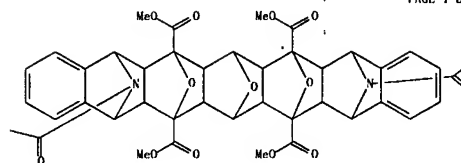
IT 233609-79-5P 332841-07-3P
 RL: RCT (Reactant): SPN (Synthetic preparation): PREP (Preparation): RACT (Reactant or reagent)
 (syn-facial hetero-bridged [n]polynorbornanes composed of fused 7-oxa- and 7-azanorbornanes)
 RN 233609-79-5 CAPLUS
 CN 6,17:7,16:8,15-Triepoxyheptacene-5,18:9,14-diimine-6,8,15,17,19,23-hexacarboxylic acid, 5,5a,6a,7,7a,8a,9,14,14a,15a,16,16a,17a,18-tetradecahydro-, 6,8,15,17-tetramethyl 19,23-bis(phenylmethyl) ester, (5a,5aB,6a,6aB,7a,7aB,8a,8aB,9a,14a,14aB,15a,15aB,16a,16aB,17a,17aB,18a,18aB)- (9C1) (CA INDEX NAME)

PAGE 1-A



L4 ANSWER 9 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-B



PAGE 1-C



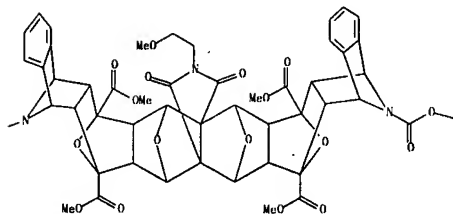
RN 332841-07-3 CAPLUS
 CN 6,19:7,18:8,17:9,16-Tetraepoxy-7a,17a-(methaniminomethano)octacene-5,20:10,15-diimine-6,9,16,19,21,29-hexacarboxylic acid, 5,5a,6,6a,7,8,8a,9,9a,10,15,15a,16,16a,17,18,18a,19,19a,20-eicosahydro-25-(2-methoxyethyl)-24,26-dioxo-, 6,9,16,19-tetramethyl 21,29-bis(phenylmethyl) ester, (5a,5aB,6a,6aB,7a,7aB,8a,8aB,9a,9aB,10a,10aB,15a,15aB,16a,16aB,17a,17aB,18a,18aB,19a,19aB,20a,20aB)- (9C1) (CA INDEX NAME)

PAGE 1-A



L4 ANSWER 9 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

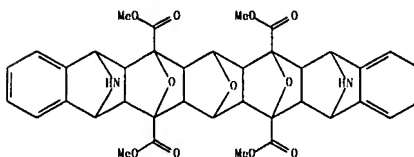
PAGE 1-B



PAGE 1-C

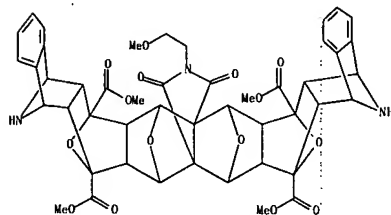


IT 332841-05-1P 332841-09-5P
 RL: SPN (Synthetic preparation): PREP (Preparation)
 (syn-facial hetero-bridged [n]polynorbornanes composed of fused 7-oxa- and 7-azanorbornanes)
 RN 332841-05-1 CAPLUS
 CN 6,17:7,16:8,15-Triepoxyheptacene-5,18:9,14-diimine-6,8,15,17-tetracarboxylic acid, 5,5a,6a,7,7a,8a,9,14,14a,15a,16,16a,17a,18-tetradecahydro-, tetramethyl ester, (5a,5aB,6a,6aB,7a,7aB,8a,8aB,9a,9aB,14a,14aB,15a,15aB,16a,16aB,17a,17aB,18a,18aB)- (9C1) (CA INDEX NAME)



RN 332841-09-5 CAPLUS

L4 ANSWER 9 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
 CN 6, 19:7, 18:8, 17:9, 16-Tetraepoxy-7a, 17a-(methaniminomethano)octacene-5, 20:10, 15-diimine-6, 9, 16, 19-tetracarboxylic acid, 5, 5a, 6, 6a, 7, 8, 8a, 9, 9a, 10, 15, 15a, 16, 16a, 17, 18, 18a, 19, 19a, 20-eicosahydro-25-(2-methoxyethyl)-24, 26-dioxo-, tetramethyl ester, (5a, 5aB, 6a, 6aB, 7a, 7aB, 8a, 8aB, 9a, 9aB, 10a, 15a, 15aB, 16a, 16aB, 17, 17a, 17aB, 18a, 18aB, 19a, 19aB, 20a)- (9C1) (CA INDEX NAME)

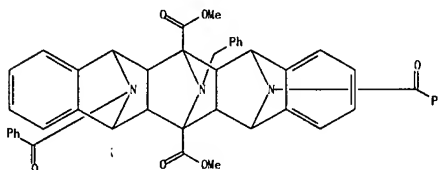


REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 10 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2001:47311 CAPLUS
 DOCUMENT NUMBER: 134:280669
 TITLE: Inside and outside N-bridged cavity systems: evidence for syn- and anti-atropisomers in scaffolds containing two N-benzoyl-7-azanorbornane units
 AUTHOR(S): Warren, R. N.; Sun, G.
 CORPORATE SOURCE: Centre for Molecular Architecture, Central Queensland University, Rockhampton, Queensland, 4702, Australia
 SOURCE: Tetrahedron Letters (2001), 42(3), 465-468
 CODEN: TELEAY; ISSN: 0040-4039
 PUBLISHER: Elsevier Science Ltd.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 ABSTRACT:

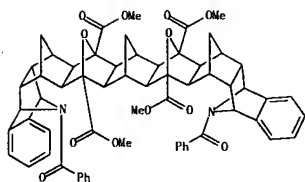
Alkene and aziridine reagents containing N-benzoyl-7-azanorbornane components have been prepared and used to construct [n]polynorbornanes in a block building protocol. The presence of syn and anti atropisomers involving the restricted rotation of the N-COPh bridge was established by ¹H NMR spectroscopy in an NNN-[3]polynorbornane (outside bridges) whereas the anti conformer dominated in a cavity NCCOCN-[7]isopolynorbornane (inside bridges, X-ray confirmation) prepared by a dual 1,3-dipolar addition of an acute-angled norbornene with a hexacyclic bis-epoxide.

IT 332402-04-7P 332402-07-0P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (preparation and syn- and anti-atropisomers in polyanorbornanes containing two N-benzoyl-7-azanorbornane units)
 RN 332402-04-7 CAPLUS
 CN Pentacene-5, 14:6, 13:7, 12-triimine-6, 13-dicarboxylic acid, 15, 17-dibenzoyl-5, 5a, 6a, 7, 12, 12a, 13a, 14-octahydro-16-(phenylmethyl)-, dimethyl ester (9C1) (CA INDEX NAME)



RN 332402-07-0 CAPLUS
 CN 7, 20:9, 18-Diepoxy-6, 21:8, 19:10, 17-trimethanononacene-5, 22:11, 16-diimine-7, 9, 18, 20-tetracarboxylic acid, 23, 29-dibenzoyl-5, 5a, 6, 6a, 7a, 8, 8a, 9a, 10, 10a, 11, 16, 16a, 17, 17a, 18a, 19, 19a, 20a, 21, 21a, 22-dicosahydro-, tetramethyl ester, (5a, 5aB, 6a, 6aB, 7a, 7aB, 8a, 8aB, 9a, 9aB, 10a, 10aB, 11a, 11aB, 16a, 16aB, 17a, 17aB, 18a, 18aB, 19a, 19aB, 20a, 20aB, 21a, 21aB, 22a)- (9C1) (CA INDEX NAME)

L4 ANSWER 10 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 11 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2000:651372 CAPLUS
 DOCUMENT NUMBER: 133:343790
 TITLE: Uranium hexakisamido complexes
 AUTHOR(S): Meyer, Karsten; Mindiola, Daniel J.; Baker, Thomas A.; Davis, William M.; Cummins, Christopher C.
 CORPORATE SOURCE: Department of Chemistry, Massachusetts Institute of Technology, Cambridge, MA, 02139-4307, USA
 SOURCE: Angewandte Chemie, International Edition (2000), 39(17), 3063-3066
 CODEN: AClEF5; ISSN: 1433-7851
 PUBLISHER: Wiley-VCH Verlag GmbH
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 133:343790
 ABSTRACT: The hexakisamidouranium(V) anion [U(dbabh)]⁻ (1, Hdbabh = 2,3,5,6-dibenzo-7-azabicyclo[2.2.1]hepta-2,5-diene) and its homoleptic one-electron oxidation uranium(VI) product [U(dbabh)6]⁺ (2) were prepared and isolated. Oxidation of 1 is observed in an electrochem. redox couple, or chemical in air or with an oxidizing agent such as silver triflate. Complex 2 can be chemical reduced to anion 1. The crystal structures of [PPh4][1] and 2 were determined by x-ray crystallog. The six amido nitrogen atoms in both species form a near-perfect octahedron around the uranium.

IT 303962-98-3P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (preparation and crystal structure of)
 RN 303962-98-3 CAPLUS
 CN Phosphonium, tetraphenyl-, (OC-6-11)-hexakis(9,10-dihydronaphthalen-9,10-imin-11-yl)uranate(1-) (9C1) (CA INDEX NAME)

CM 1

CRN 303962-96-1
 CMF C84 H60 N6 U
 CCI CCS

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 18198-39-5
 CMF C24 H20 P



IT 303962-97-2P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 303962-97-2 CAPLUS
 CN Ethanaminium, N,N,N-triethyl-, (OC-6-11)-hexakis(9,10-dihydronaphthalen-9,10-imin-11-yl)uranate(1-) (9C1) (CA INDEX NAME)

CM 1

CRN 303962-96-1
 CMF C84 H60 N6 U
 CCI CCS

L4 ANSWER 11 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CN 2

CRN 66-40-0
CMF C8 H20 N

IT 303962-95-0P

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent);
(preparation, low-temperature X-band ESR, and oxidation to uranium(VI) hexakisamido derivative)

RN 303962-95-0 CAPLUS

CN Uranate(1-), hexakis(anthracen-9,10-iminato)-, (OC-6-11)-, lithium, compd. with tetrahydrofuran (9C1) (CA INDEX NAME)

CN 1

CRN 303962-94-9
CMF C84 H60 N6 U . Li
CCI CCS

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CN 2

CRN 109-99-9
CMF C4 H8 O

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 12 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:142717 CAPLUS

DOCUMENT NUMBER: 132:278781

TITLE: In-line proximity effects in extended 7-azanorbornanes. I. A new concept for modifying effector group separation based on the control of N-invertomer geometry

AUTHOR(S): Butler, Douglas N.; Hammond, Malcom L. A.; Johnston, Martin R.; Sun, Guangxing; Malpass, John R.; Fawcett, John; Warrenner, Ronald N.

CORPORATE SOURCE: Centre for Molecular Architecture, Central Queensland University, Rockhampton, 4702, Australia

SOURCE: Organic Letters (2000), 2(6), 721-724

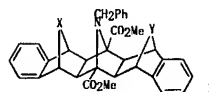
CODEN: ORLEFF; ISSN: 1523-7060

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

GRAPHIC IMAGE:



ABSTRACT:

Control of N-substituent geometry in fused 7-azanorbornane systems is based on the dominance of one proximate bridge (sentinel X) over the other (sentinel Y) relative to the N-bridge (e.g., 1; X,Y = CH2, spirocyclopropyl, C:Me2, NO2CH2Ph, O); the N-inversion equilibrium can effectively be displaced in favor of a single invertomer. This study has used a combination of synthesis, crystallog., and mol. modeling to establish stereostructures.

IT 263411-75-2P

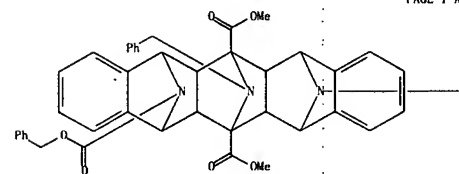
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation and stereostructures of N-bridged [3]polynorbornanes)

RN 263411-75-2 CAPLUS

CN Pentacene-5,14:6,13:7,12-triimine-6,13,15,17-tetracarboxylic acid, 5,5a,6a,7,12,12a,13a,14-octahydro-16-(phenylmethyl)-, 6,13-dimethyl 15,17-bis(phenylmethyl) ester, (5a,5aB,6a,6aB,7,7a,7aB,12aB,12aB,13aB,13aB,14aB,14aB)- (9C1) (CA INDEX NAME)

L4 ANSWER 12 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A



PAGE 1-B



REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 13 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:321286 CAPLUS

DOCUMENT NUMBER: 131:116165

TITLE: Molecular topology: the synthesis of a new class of rigid arc-shaped spacer molecules based on syn-facially fused norbornanes and 7-heteronorbornanes in which heterobridges are used to govern backbone curvature

AUTHOR(S): Warrenner, Ronald N.; Margetic, Davor; Sun, Guangxing; Amarasekara, Ananda S.; Foley, Patrick; Butler, Douglas N.; Russell, Richard A.

CORPORATE SOURCE: Centre for Molecular Architecture, Central Queensland University, Rockhampton, 4702, Australia

SOURCE: Tetrahedron Letters (1999), 40(21), 4111-4114

CODEN: TELEAY; ISSN: 0040-4039

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

ABSTRACT:

The reaction of norbornadienes and 7-heteronorbornadienes with 7-oxa (or carba or aza) norbornene-fused cyclobutene epoxides (or aziridines) gave hetero-bridged polynorbornane cycloadducts containing syn-facially arranged N,O (or C,N or C,O) bridges. New dual cyclobutene epoxides and dual cyclobutene aziridines are used to prepare multi-fused norbornanes having curved topol. in which the heteroatoms modify the curvature in a predictable way CANDO: ANI modeling of representative [9]polynorbornanes is presented.

IT 233609-79-5P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation and mol. topol. of arc-shaped spacer mols. based on syn-facially fused norbornanes and heteronorbornanes in which heterobridges govern backbone curvature)

RN 233609-79-5 CAPLUS

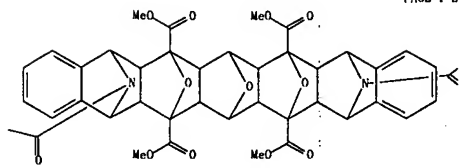
CN 6,17:7,16:8,15-Triepoxyheptacene-5,18:9,14-diimine-6,8,15,17,19,23-hexacarboxylic acid, 5,5a,6a,7,7a,8a,9,14,14a,15a,16,16a,17a,18-tetradecahydro-, 6,8,15,17-tetramethyl 19,23-bis(phenylmethyl) ester, (5a,5aB,6a,6aB,7a,7aB,8a,8aB,9a,14a,14aB,15a,15aB,16a,16aB,17a,17aB,18a,18aB)- (9C1) (CA INDEX NAME)

PAGE 1-A



L4 ANSWER 13 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-B



PAGE 1-C



REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 14 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1998:551313 CAPLUS

DOCUMENT NUMBER: 129:245259

TITLE: Synthesis and crystal structure of (η²-olefin)(N-phenyl-2,3-dicarbomethoxy-7-azabenzonorbornadiene)Fe(CO)₂ complex

AUTHOR(S): Sun, Chia-Hsing; Wu, Shiao-Yu; Liou, Lin-Shu; Wang, Ju-Chun

CORPORATE SOURCE: Department of Chemistry, Soochow University, Taipei, 111, Taiwan

SOURCE: Journal of the Chinese Chemical Society (Taipei) (1998), 45(4), 563-567

CODEN: JCCATC; ISSN: 0009-4536

PUBLISHER: Chinese Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 129:245259

ABSTRACT:

The title compds. (olefin = di-Me fumarate, di-Me maleate, maleic anhydride, N-Ph maleimide, N-phenyl-7-azabenzonorbornadiene, Et acrylate) 2a-f were obtained from photochem. substitution of (N-phenyl-2,3-dicarbomethoxy-7-azabenzonorbornadiene)Fe(CO)₂ 1 with the corresponding alkenes as stable solids in moderate (45-71%) yields. X-ray structure determination of 2c shows a distorted trigonal bipyramidal geometry with two cross Fe-coordinated olefins. 2A-f represent a new type of (η²-monoolefin)2(R₃N)Fe(CO)₂.

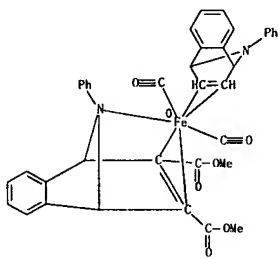
IT 212956-33-7P

RL: SPN (Synthetic preparation); PREP (Preparation)

(Preparation of (alkene)(azabenzonorbornadiene)iron complexes by photochem. substitution reaction or iron tricarbonyl complex with alkenes)

RN 212956-33-7 CAPLUS

CN 212956-33-7 CAPLUS Iron, dicarbonyl[(2,3-n)-1,4-dihydro-9-phenylnaphthalen-1,4-imine][rel-(2,3-n)-dimethyl (1R,4S)-1,4-dihydro-9-phenylnaphthalen-1,4-imine-2,3-dicarboxylate-κN9]-, stereoisomer (9CI) (CA INDEX NAME)



REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 15 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1998:376545 CAPLUS

DOCUMENT NUMBER: 129:95424

TITLE: Building BLOCKs in synthesis. Part 4. A 1,3-dipolar cycloaddition route to 7-azanorbornanes. Application to the synthesis of syn-facial N-bridged polynorbornanes

AUTHOR(S): Butler, Douglas N.; Malpass, John R.; Margetic, Davor; Russell, Richard A.; Sun, Guang Xing; Warriner, Ronald N.

CORPORATE SOURCE: Center Molecular Architecture, Central Queensland University, Rockhampton, 4702, Australia

SOURCE: Synlett (1998), (6), 589-589

CODEN: SYNLES; ISSN: 0936-5214

PUBLISHER: Georg Thieme Verlag

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 129:95424

ABSTRACT:

Aziridinocyclobutenes react with electron-deficient or ring-strained alkenes to produce 7-azanorbornenes in a novel 1,3-dipolar cycloaddn. reaction suitable for BLOCK assembly protocols. Benzo-7-azanorbornadiene and 7-hetero-bridged analogs react stereoselectively to produce compds. with syn-facial orientation of their bridges.

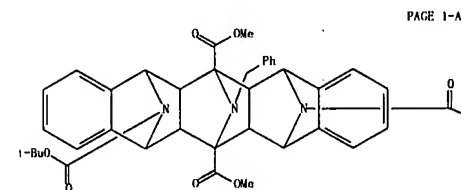
IT 209674-68-0P 209674-70-4P

RL: SPN (Synthetic preparation); PREP (Preparation)

(Preparation of N-bridged polynorbornanes by dipolar cycloaddn. via azanorbornanes)

RN 209674-68-0 CAPLUS

CN 209674-68-0 CAPLUS Penicame-5,14:6,13:7,12-triazine-6,13,15,17-tetracarboxylic acid, 5,5a,6a,7,12,12a,13a,14-octahydro-16-(phenylmethyl)-, 15,17-bis(1,1-dimethylethyl) 6,13-dimethyl ester. (SR,5aR,6R,6aS,7S,12R,12aR,13S,13aS,14S)-rel- (9CI) (CA INDEX NAME)



PAGE 1-A

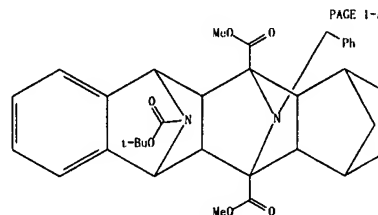
PAGE 1-B



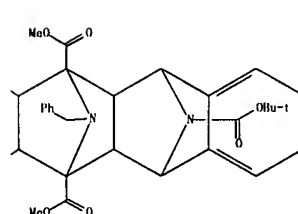
RN 209674-70-4 CAPLUS

L4 ANSWER 15 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

CN 7,16-methanoheptacene-6,18:6,17:8,15:9,14-tetrazine-6,8,15,17,19,23-hexacarboxylic acid, 5,5a,6a,7,7a,8a,9,14,14a,15a,16,16a,17a,18-tetradecahydro-20,22-bis(phenylmethyl)-, 19,23-bis(1,1-dimethylethyl) 6,8,15,17-tetramethyl ester. (5a,5aB,6a,6aB,7a,7aB,8a,8aB,9a,14a,14aB,15a,15aB,16a,16aB,17a,17aB,18a)- (9CI) (CA INDEX NAME)



PAGE 1-A



PAGE 1-B

L4 ANSWER 16 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1998:308815 CAPLUS

DOCUMENT NUMBER: 129:27875

TITLE: Novel 'windscreen wiper' cavity structures formed by the cycloaddition of N-substituted isoindoles onto molrac bis-alkenes

AUTHOR(S): Malpass, John R.; Sun, Guangxing; Fawcett, John; Warren, Ronald N.

CORPORATE SOURCE: Centre Mol. Architecture, Central Queensland Univ., Rockhampton, 4702, Australia

SOURCE: Tetrahedron Letters (1998), 39(19), 3083-3086

CODEN: TELEAY; ISSN: 0040-4039

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 129:27875

ABSTRACT:

A strong N-substituent effect is observed in the reaction of isoindole with cyclobutene-1,2-diester: N-alkoxycarbonyl derivs. react to form adducts with bent-frame stereostructures; N-alkylisoindoles produce both extended-frame (stable) and bent-frame (unstable) stereoisomers, but require high-pressure conditions (10-15 kbar). N-acyl isoindoles fail to react. The first 'windscreen wiper' N-bridged cavity compound was prepared, the structure of which was confirmed by x-ray anal.

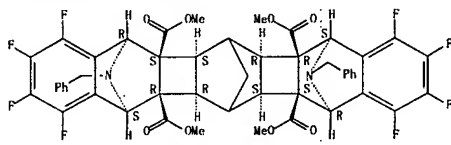
IT 208117-32-2P

RL: PRP (Properties): SPN (Synthetic preparation): PREP (Preparation) (Preparation of windscreen wiper cavity structures by cycloaddn. of N-substituted isoindoles onto molrac bis-alkenes)

RN 208117-32-2 CAPLUS

CN 6,13-Methanobenzo[b]naphtho[2',3':3,4]cyclobuta[1,2-h]biphenylene-5,14:7,12-diamine-5a,6b,12a,13b-tetracarboxylic acid, 1,2,3,4,8,9,10,11-octafluoro-5,5b,6,6b,7,12,12b,13,13a,14-decahydro-15,17-bis(phenylmethyl)-, tetramethyl ester, (5R,5aS,5bS,6aR,6bR,7S,12R,12aS,12bS,13aR,13bR,14S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 17 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1995:495282 CAPLUS

DOCUMENT NUMBER: 123:227683

TITLE: [2+2] Dimerization of norbornadiene and its derivatives in the presence of nickel complexes and zinc metal

AUTHOR(S): Huang, Daw-Jen; Cheng, Chien-Hong

CORPORATE SOURCE: Department of Chemistry, National Tsing Hua University, Hsinchu, 300, Taiwan

SOURCE: Journal of Organometallic Chemistry (1995), 490(1-2), C1-C7

CODEN: JORCAI; ISSN: 0022-328X

PUBLISHER: Elsevier

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 123:227683

ABSTRACT:

Norbornadiene undergoes [2+2] reaction in THF in the presence of NiX₂ and Zn powder to give an exo-trans-exo dimer and an exo-trans-exo-trans-exo trimer. In these products, the norbornadiene mol's. are linked to each other by forming cyclobutane rings with all cyclobutane carbons occupying exo positions relative to the bridging carbons on the two norbornadiene fragments. Polymerization of norbornadiene occurs if the catalyst NiX₂ is replaced by Ni(PPH₃)₂Cl₂: 1,4-dihydro-1,4-epoxynaphthalene, 5,8-dimethoxy-1,4-dihydro-1,4-epoxynaphthalene, 5-methoxy-1,4-dihydro-1,4-epoxynaphthalene and Me 1,4-dihydro-1,4-iminonaphthalene-9-carboxylate also dimerize to give exo-trans-exo products in excellent yields in toluene in the presence of Ni(PPH₃)₂Cl₂ and Zn powder. For the dimerization products of 5-methoxy-1,4-dihydro-1,4-epoxynaphthalene, cis and trans isomers with respect to the orientation of methoxy groups in about 1:1 ratio were observed. Under similar reaction conditions for the dimerization of norbornadiene, norbornene undergoes reductive dimerization to afford a product which consists of two norbornyl groups. The structure of this product is also exo-trans-exo. NiBr₂. Zn powder and norbornadiene were stirred at 50° for 72 h to give both the dimer and trimer.

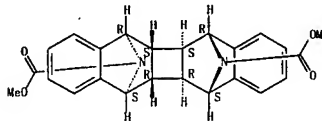
IT 168297-14-1P

RL: SPN (Synthetic preparation): PREP (Preparation) (dimerization of norbornadiene and its derivs. in the presence of nickel complexes and zinc metal)

RN 168297-14-1 CAPLUS

CN Dibenzo[b,h]biphenylene-5,12:6,11-diamine-13,14-dicarboxylic acid, 5,5a,5b,6,11,11a,11b,12-octahydro-, dimethyl ester, (5a,5b,5b',6b',11a,11b,11b',12a,12a')- (9CI) (CA INDEX NAME)

Relative stereochemistry.



L4 ANSWER 18 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1988:492840 CAPLUS

DOCUMENT NUMBER: 109:92840

TITLE: Tetrahalobenzenes as diaryne equivalents in polycyclic arene synthesis

AUTHOR(S): Hart, Harold; Lai, Chung Yin; Nwokogu, Godson

CORPORATE SOURCE: Chukueke, Shamoulian, Shamouli

SOURCE: Tetrahedron (1987), 43(22), 5203-24

CODEN: TETRAH; ISSN: 0040-4020

PUBLISHER: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 109:92840

ABSTRACT:

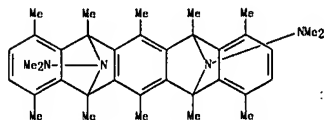
1,2,4,5-Tetrahalobenzenes and analogous naphthalenes react with one or two equivalent of BuLi and various dienes (furans, pyrroles, cyclopentadienes, fulvenes) to form mono- or bis-cycloadducts. Highly substituted arenes can be obtained by removing the O or N bridges from the furan or pyrrole adducts. By choice of conditions, two identical or two different rings can be fused to the diaryne equivalent. Improved short synthesis of permethylnaphthalene, anthracene and -naphthacene are described. A new triphenylene synthesis is presented.

IT 115711-02-0P

RL: SPN (Synthetic preparation): PREP (Preparation) (preparation of)

RN 115711-02-0 CAPLUS

CN Pentacene-5,14:7,12-diamine-15,16-diamine, 5,7,12,14-tetrahydro-N,N,N',N',1,4,5,6,7,8,11,12,13,14-tetradecamethyl- (9CI) (CA INDEX NAME)



L4 ANSWER 19 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1988:94433 CAPLUS

DOCUMENT NUMBER: 108:94433

TITLE: anti-5,16:10,15-Bis(tert-butylimino)-1,2,3,4,11,12,13,14-octamethyl-5,10,15,16-tetrahydrobenzo[h]pentaphene

AUTHOR(S): Preut, H.; Hildebrand, T.; Kreher, R. P.

CORPORATE SOURCE: Fachbereich Chem., Univ. Dortmund, Dortmund, D-4600/50, Fed. Rep. Ger.

SOURCE: Acta Crystallographica, Section C: Crystal Structure Communications (1988), C44(1), 203-5

CODEN: ACSCEE; ISSN: 0108-2701

PUBLISHER: Journal

LANGUAGE: English

ABSTRACT:

The title compound is triclinic, space group P₂1₂1, with a 11.701(9), b 11.796(15), c 15.538(8) Å, α 69.12(7), β 62.27(7), γ 67.15(7)°; d_c = 1.133 for Z = 2. The final R = 0.062 for 3466 reflections. Atomic coordinates are given. The constitution and configuration of the hitherto unknown Diels-Alder adduct of 2,5-di-tert-butyl-2,5-dihydrobenzo[e]pyrrolo[3,4-g]isoindole with 3,4,5,6-tetramethyl-1,2-dehydrobenzene was elucidated via the crystal structure anal. The tert-Bu groups of the annelated cyclic compound are in anti position. The perpendicular to the plane of the naphthalene ring and the direction through the position of the N and the central C of the tert-Bu groups are nearly parallel and therefore there is ample space at the N atoms for the free electron pairs.

IT 111558-06-6P

RL: PRP (Properties): SPN (Synthetic preparation): PREP (Preparation) (preparation and crystal structure of)

RN 111558-06-6 CAPLUS

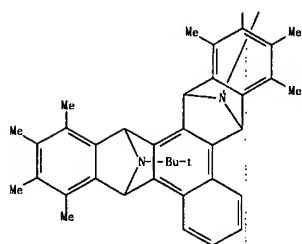
CN Benzo[h]pentaphene-5,16:10,15-diamine, 17,18-bis(1,1-dimethylethyl)-5,10,15,16-tetrahydro-1,2,3,4,11,12,13,14-octamethyl-, (5a,10b,15b,16a)- (9CI) (CA INDEX NAME)

PAGE 1-A



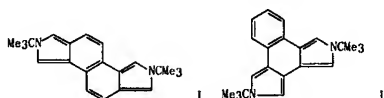
L4 ANSWER 19 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 2-A



L4 ANSWER 20 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN

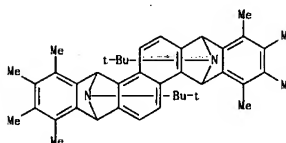
ACCESSION NUMBER: 1988:55823 CAPLUS
 DOCUMENT NUMBER: 108:55823
 TITLE: Structure and reactivity of isoannulated heterocyclic systems with $4n\pi$ - and $(4n+2)\pi$ -electrons. 13.
 AUTHOR(S): Kreher, Richard P.; Hildebrand, Thomas
 CORPORATE SOURCE: Univ. Dortmund, Dortmund, D-4600, Fed. Rep. Ger.
 SOURCE: Angewandte Chemie (1987), 99(12), 1325-7
 CODEN: ANCEAD; ISSN: 0044-8249
 DOCUMENT TYPE: Journal
 LANGUAGE: German
 OTHER SOURCE(S): CASREACT 108:55823
 GRAPHIC IMAGE:



ABSTRACT:

Heterenes I and II were prepared in 65% and 51% yields, resp. in several convention synthetic steps from 2,6-dimethylnaphthalene and 1,2,3,4-tetramethylnaphthalene, resp.

IT 111558-05-SP 111558-06-6P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (preparation and spectra of)
 RN 111558-05-5 CAPLUS
 CN Dibenzo[b,k]chrysene-5,16:8,13-diimine, 17,18-bis(1,1-dimethylethyl)-5,8,13,16-tetrahydro-1,2,3,4,9,10,11,12-octamethyl-, (5a,8a,13a,16a)- (9CI) (CA INDEX NAME)



RN 111558-06-6 CAPLUS
 CN Benzo[h]pentaphene-5,16:10,15-diimine, 17,18-bis(1,1-dimethylethyl)-5,10,15,16-tetrahydro-1,2,3,4,11,12,13,14-octamethyl-, (5a,10a,15a,16a)- (9CI) (CA INDEX NAME)

L4 ANSWER 20 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A

L4 ANSWER 21 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN

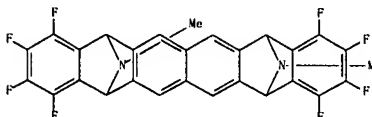
ACCESSION NUMBER: 1985:471031 CAPLUS
 DOCUMENT NUMBER: 103:71031
 TITLE: Twin benzannulation of naphthalene via 1,3-, 1,6-, and 2,6-naphthodiyne synthetic equivalents. New syntheses of triphenylene, benz[a]anthracene, and naphthacene
 AUTHOR(S): Gribble, Gordon W.; Perni, Robert B.; Onan, Kay D.
 CORPORATE SOURCE: Dep. Chem., Dartmouth Coll., Hanover, NH, 03755, USA
 SOURCE: Journal of Organic Chemistry (1985), 50(16), 2934-9
 CODEN: JOCEAH; ISSN: 0022-3263
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 103:71031
 GRAPHIC IMAGE:

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

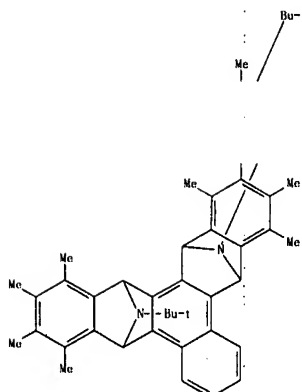
ABSTRACT:

New syntheses of triphenylene (I, R = H), benz[a]anthracene (II), naphthacene (III, RI = H), and the tetramethylated derivs. I (R = Me) and III (RI = Me), are described that feature, as the key step, the formal Diels-Alder cyclodn. between a naphthodiyne equivalent, e.g., dibromoditosylate IV (Ts = p-tolylsulfonyl) and a furan. Subsequent deoxygenation affords the arene in 16-28% overall yield from dibromo ditosylates. The latter are prepared in two steps from com. available 2,3- or 2,7-dihydroxynaphthalene, and, with PhLi, serve as synthetic equivs. of naphthodienes. The x-ray structure of the anti isomer of V is discussed in some detail.

IT 96065-77-4P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 96065-77-4 CAPLUS
 CN Hexacene-5,16:8,13-diimine, 1,2,3,4,9,10,11,12-octafluoro-5,8,13,16-tetrahydro-17,18-dimethyl- (9CI) (CA INDEX NAME)



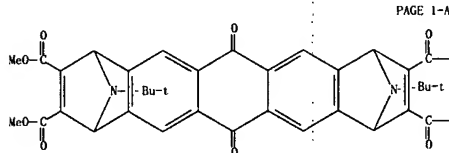
PAGE 2-A



L4 ANSWER 22 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1984:630302 CAPLUS
 DOCUMENT NUMBER: 101:230302
 TITLE: Structure and reactivity of isoannulated heterocyclic systems with $4n+2$ and $(4n+2)+2$ electrons. Part 10. Oligocyclic heteroarenes with quinoid structure; synthesis by sequential cyclic condensation
 AUTHOR(S): Kreher, Richard P.; Pfister, Juergen
 CORPORATE SOURCE: Univ. Dortmund, Dortmund, D-4600/50, Fed. Rep. Ger.
 SOURCE: Angewandte Chemie (1984), 96(11), 906-7
 CODEN: ANCEAD; ISSN: 0044-8249
 DOCUMENT TYPE: Journal
 LANGUAGE: German
 GRAPHIC IMAGE: For diagram(s), see printed CA issue.

ABSTRACT:
 Oligocyclic heteroarenes with quinoid structures were prepared by sequential condensation of 1 (R = CMe₃, CH₂Ph) with 1,4-cyclohexanedione to give 45-50% primary condensation products II which condensed with I to give 90-95% isoindoles III or with arenedicarboxaldehydes IV (X = H₂, CH=CHCH=CH, o-CH=CHC₆H₄CH=CH) to give 40-60% V. I (R = CMe₃) and 1,4-naphthalenediol gave 75% VI. III, V, and VI reacted with Me₂CCl₂ to give the corresponding cycloadducts.

IT 92763-87-6P 92843-01-IP
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 92763-87-6 CAPLUS
 CN Pentacene-1,4,8,11-dimine-2,3,9,10-tetracarboxylic acid, 15,16-bis(1,1-dimethylethyl)-1,4,6,8,11,13-hexahydro-6,13-dioxo-, tetramethyl ester, (1a,4a,8a,11a)- (9CI) (CA INDEX NAME)



PAGE 1-A

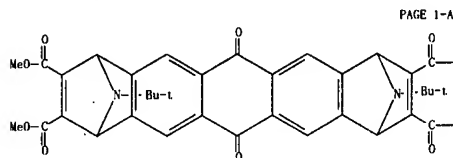
PAGE 1-B

—OMe

—OMe

RN 92843-01-1 CAPLUS
 CN Pentacene-1,4,8,11-dimine-2,3,9,10-tetracarboxylic acid.

L4 ANSWER 22 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
 15,16-bis(1,1-dimethylethyl)-1,4,6,8,11,13-hexahydro-6,13-dioxo-, tetramethyl ester, (1a,4a,8a,11a)- (9CI) (CA INDEX NAME)



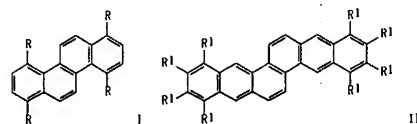
PAGE 1-A

PAGE 1-B

—OMe

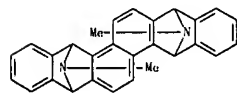
—OMe

L4 ANSWER 23 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1983:197743 CAPLUS
 DOCUMENT NUMBER: 98:197743
 TITLE: Twin annulation of naphthalene via a 1,5-naphthodiyne synthon. New syntheses of chrysene and dibenzo[b,k]chrysene
 AUTHOR(S): Lehoullier, Craig S.; Gribble, Gordon W.
 CORPORATE SOURCE: Dep. Chem., Dartmouth Coll., Hanover, NH, 03755, USA
 SOURCE: Journal of Organic Chemistry (1983), 48(10), 1682-5
 CODEN: JOCEAH; ISSN: 0022-3263
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 98:197743
 GRAPHIC IMAGE:



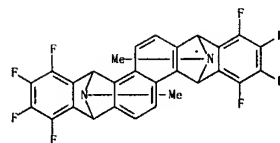
ABSTRACT:
 New, efficient syntheses of chrysenes I (R = H, Me) and dibenzo[b,k]chrysenes II (R = H, F) featured the formal cyclodn. between 1,5-naphthodiyne (III) and a heterocyclic diene such as furan, pyrroles, and isoindoles as the key step. Subsequent manipulation afforded 26-49% I, or II overall from 2,6-dibromo-1,5-dihydroxynaphthalene. The latter was easily converted to ditosylate, which, with PhLi, served as a synthon for III.

IT 85337-36-6P 85337-37-7P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and oxidative demethylation of)
 RN 85337-36-6 CAPLUS
 CN Dibenzo[b,k]chrysene-5,16:8,13-dimine, 5,8,13,16-tetrahydro-17,18-dimethyl- (9CI) (CA INDEX NAME)



RN 85337-37-7 CAPLUS
 CN Dibenzo[b,k]chrysene-5,16:8,13-dimine, 1,2,3,4,9,10,11,12-octafluoro-5,8,13,16-tetrahydro-17,18-dimethyl- (9CI) (CA INDEX NAME)

L4 ANSWER 23 OF 23 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



=> => d que 111 stat

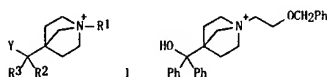
L5 51 SEA FILE=CAPLUS ABB=ON PLU=ON ("BUSCH PETERSEN J"/AU OR
"BUSCH PETERSEN JAKOB"/AU)
L6 18 SEA FILE=CAPLUS ABB=ON PLU=ON ("COOPER ANTHONY W J"/AU OR
"COOPER ANTHONY WILLIAM JAMES"/AU)
L7 35 SEA FILE=CAPLUS ABB=ON PLU=ON ("LAINE DRAMANE"/AU OR "LAINE
DRAMANE I"/AU OR "LAINE DRAMANE IBRAHIM"/AU)
L8 18 SEA FILE=CAPLUS ABB=ON PLU=ON ("MCCLELAND BRENT"/AU OR
"MCCLELAND BRENT W"/AU)
L9 63 SEA FILE=CAPLUS ABB=ON PLU=ON ("PALOVICH MICHAEL"/AU OR
"PALOVICH MICHAEL R"/AU OR "PALOVICH MICHAEL ROBERT"/AU)
L10 120 SEA FILE=CAPLUS ABB=ON PLU=ON L5 OR L6 OR L7 OR L8 OR L9
L11 35 SEA FILE=CAPLUS ABB=ON PLU=ON L10 AND MUSCARINIC

=> d 1-35 bib abs

L11 ANSWER 1 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
 AN 2007:170495 CAPLUS
 TI Discovery of novel 8-azabicyclo[3.2.1]octane carbanates as muscarinic acetylcholine receptor antagonists
 AU Laine, Dramane I.; Xie, Haibo; Buffet, Noemie; Foley, James J.; Buckley, Peter; Webb, Edward F.; Widdowson, Katherine L.; Palovich, Michael R.; Belmonte, Kristen E.
 CS GlaxoSmithKline, King of Prussia, PA, 19406, USA
 SO Bioorganic & Medicinal Chemistry Letters (2007), 17(22), 6066-6069
 CODEN: BMCLE8; ISSN: 0960-894X
 PB Elsevier Ltd.
 DT Journal
 LA English
 AB In the course of our research program to develop novel muscarinic receptor antagonists for the treatment of COPD, new tropane carbanate derivs. were identified as potent anti-muscarinic agents. The synthesis, structure-activity relationships and pharmacol. evaluation that led to the identification of compound 50, are described.
 RE. CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 2 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
 AN 2007:200864 CAPLUS
 DN 146:274232
 TI Preparation of azoniabicyclo[2.2.1]heptane bromide derivatives as muscarinic acetylcholine receptor antagonists
 IN Laine, Dramane I.; Palovich, Michael R.; McClelland, Brent W.
 PA Glaxo Group Limited, UK
 SO PCT Int. Appl., 33pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN. CNT 1

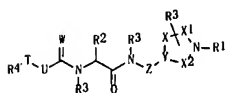
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2007022351	A2	20070222	WO 2006-US32138	20060817
WO 2007022351	A3	20071004		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW			
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TN, AP, EA, EP, DA			
PRAI US 2005-709301P	P	20050818		
OS MARPAT 146:274232				
GI				



AB Title compds. represented by the formula 1-X- [wherein Y = OH or CN; R1 = (cyano)alkyl, haloalkyl, alkylaryl, etc.; R2, R3 = independently (un)substituted (hetero)aryl; X- = physiologically acceptable anion] were prepared as muscarinic acetylcholine receptor antagonists. For example, condensation of Et 1-azabicyclo[2.2.1]heptane-4-carboxylate with phenyllithium (54%), and followed by N-alkylation with 2-bromoethyl phenylmethyl ether (36%), gave 11-b. The biol. assays for inhibition of muscarinic acetylcholine receptor and formulation-administration were described. Thus, 1 and their pharmaceutical compns. are useful for the treatment of muscarinic acetylcholine receptor mediated diseases, such as chronic obstructive lung disease (no data).

L11 ANSWER 3 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
 AN 2007:174409 CAPLUS
 DN 146:252103
 TI Preparation of amino acid derivatives as M3 muscarinic acetylcholine receptor antagonists
 IN Busch-Petersen, Jakob; Fu, Wei; Jin, Jian; Moore, Michael Lee; Rivero, Ralph A.; Shi, Dongchuan; Wang, Feng
 PA Glaxo Group Limited, UK
 SO PCT Int. Appl., 66pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN. CNT 1

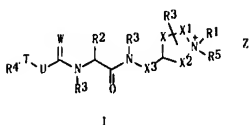
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2007018514	A1	20070215	WO 2005-US26877	20050728
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LA, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SV, TJ, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, TJ, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
PRAI WO 2005-US26877		20050728		
OS MARPAT 146:252103				
GI				



AB Amino acid derivs. 1 [X is C, O; Y is C, N; X1, X2, Z are (CH2)0-2; R1 is H, (un)substituted alkyl, Ph, thienyl, furyl, etc.; R2 is methylene, ethylene, or propylene substituted by Ph, thienyl, furyl, pyridyl, naphthyl, quinolyl, indolyl, benzothienyl, benzofuranyl, etc.; R3 is H, (un)substituted alkyl, cycloalkyl, Ph, etc.; R4 is (un)substituted alkyl, cycloalkyl, Ph, etc.; U is NR3, O, or a bond; W is O, S, or NH; T is (un)substituted Ph, thienyl, furyl, pyridyl, naphthyl, quinolyl, indolyl, benzothienyl, or benzofuranyl] were prepared as muscarinic acetylcholine receptor antagonists. Thus, Et 4-[[[1-(4-hydroxyphenyl)methyl]-2-[[1-[(4-hydroxyphenyl)methyl]-3-pyrrolidinyl]amino]-2-oxoethyl]amino]carboxyl]amino]benzoate was prepared by a multistep procedure in solid phase starting from protected tyrosine.
 RE. CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 4 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
 AN 2007:174402 CAPLUS
 DN 146:252102
 TI Preparation of amino acid derivatives as M3 muscarinic acetylcholine receptor antagonists
 IN Busch-Petersen, Jakob; Fu, Wei; Jin, Jian; Moore, Michael Lee; Rivero, Ralph A.; Shi, Dongchuan; Wang, Feng; Wang, Yonghui
 PA Glaxo Group Limited, UK
 SO PCT Int. Appl., 100pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN. CNT 1

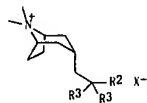
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2007018508	A1	20070215	WO 2005-US26756	20050728
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LA, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SV, TJ, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, TJ, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
PRAI WO 2005-US26756		20050728		
OS MARPAT 146:252102				
GI				



AB Amino acid derivs. 1 [X is C, O; X1, X2, X3 are (CH2)0-2; R1 is H, (un)substituted alkyl, Ph, thienyl, furyl, etc.; R2 is methylene, ethylene, or propylene substituted by Ph, thienyl, furyl, pyridyl, naphthyl, quinolyl, indolyl, benzothienyl, benzofuranyl, etc.; R3 is H, (un)substituted alkyl, cycloalkyl, Ph, etc.; R4, R5 are (un)substituted alkyl, cycloalkyl, Ph, etc.; U is NR3, O, or a bond; W is O, S, or NH; T is (un)substituted Ph, thienyl, furyl, pyridyl, naphthyl, quinolyl, indolyl, benzothienyl, or benzofuranyl] were prepared as muscarinic acetylcholine receptor antagonists. Thus, N-[[[4-(ethoxycarbonyl)phenyl]amino]carboxyl]-N-[(3S)-1-[(4-hydroxyphenyl)methyl]-1-methyl-3-pyrrolidinyl]-L-tyrosinamide tri(luorocacetate) was prepared by a multistep procedure in solid phase starting from protected tyrosine.
 RE. CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 5 OF 35 CAPLUS COPYRIGHT 2007 ACS ON STN
 AN 2007:146107 CAPLUS
 DN 146:229203
 TI Preparation of azoniabicyclooctanes as M3 muscarinic acetylcholine receptor antagonists.
 IN Busch-Petersen, Jakob; Laine, Drame Ibrahim; Palovich, Michael R.; Davis, Roderick S.; Fu, Wei; Xie, Haibo
 PA Glaxo Group Limited, UK
 SO PCT Int. Appl., 42pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN, CNT 1

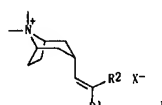
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
P1 WO 2007016639	A2	20070208	WO 2006-US30153	20060802
WO 2007016639	A3	20070705		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GN, GR, GU, HD, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RD, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RD, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, MD, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA				
PRA1 US 2005-704579P	P	20050802		
OS MARPAT 146:229203				
G1				



AB Title compds. [1: R1, R2 = (substituted) Ph, thienyl, pyridyl, PhCH2, pyrimidinyl, thiazolyl, isothiazolyl, cycloalkyl, etc.; R3 = H, OH; X = physiologically acceptable anion], were prepared for treatment of chronic obstructive pulmonary disease, chronic bronchitis, asthma, chronic respiratory obstruction, pulmonary fibrosis, emphysema, and allergic rhinitis (no data). Thus, 2-[[3-(endo)-8-methyl-8-azabicyclo[3.2.1]oct-3-yl]-1,1-bis(3-methyl-2-thienyl)ethanol (preparation given) was treated with MeBr in tert-Bu Me ether to give 61% (3-endo)-3-[2-hydroxy-2,2-bis(3-methyl-2-thienyl)ethyl]-8,8-dimethyl-8-azoniabicyclo[3.2.1]octane bromide.

L11 ANSWER 6 OF 35 CAPLUS COPYRIGHT 2007 ACS ON STN
 AN 2007:144089 CAPLUS
 DN 146:229182
 TI Preparation of 3-(arylethenyl)-8,8-dimethyl-8-azoniabicyclo[3.2.1]octanes as M3 muscarinic acetylcholine receptor antagonists.
 IN Busch-Petersen, Jakob; Laine, Drame Ibrahim; Palovich, Michael R.; Davis, Roderick S.; Fu, Wei; Xie, Haibo
 PA Glaxo Group Limited, UK
 SO PCT Int. Appl., 35pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
P1 WO 2007016650	A2	20070208	WO 2006-US30218	20060802
WO 2007016650	A3	20070531		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GN, GR, GU, HD, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RD, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RD, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, MD, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA				
PRA1 US 2005-704578P	P	20050802		
OS MARPAT 146:229182				
G1				



AB Title compds. [1: R1, R2 = (substituted) Ph, thienyl, pyridyl, PhCH2, pyrimidinyl, thiazolyl, isothiazolyl, cycloalkyl, etc.; X = pharmaceutically acceptable counterion], were prepared for treatment of COPD, chronic bronchitis, asthma, chronic respiratory obstruction, pulmonary fibrosis, emphysema, and allergic rhinitis (no data). Thus, (endo)-3-[2,2-bis(3-hydroxyphenyl)ethyl]-8,8-dimethyl-8-azoniabicyclo[3.2.1]octane bromide was prepared from tri-Me phosphonate, tropinone, MeI, and 3-methoxyphenylmagnesium bromide.

L11 ANSWER 7 OF 35 CAPLUS COPYRIGHT 2007 ACS ON STN
 AN 2006:972157 CAPLUS
 DN 145:836551
 TI Fluorescent styryl dyes FM1-43 and FM2-10 are muscarinic receptor antagonists: intravital visualization of receptor occupancy
 AU Mazonne, Stuart R.; Mori, Nanako; Surman, Miriam; Palovich, Michael; Belmonte, Kristin E.; Canning, Brendan J.
 CS The Howard Florey Institute, University of Melbourne, Victoria, 3010, Australia
 SO Journal of Physiology (Oxford, United Kingdom) (2006), 575(1), 23-35
 CODEN: JPHYA7; ISSN: 0022-3751
 PB Blackwell Publishing Ltd.
 DT Journal
 LA English
 AB

The fluorescent styryl dyes FM1-43 and FM2-10 have been used to visualize the endocytic and exocytic processes involved in neurotransmission in a variety of central and peripheral nerve preps. Their utility is limited to some extent by a poorly understood vesicular-independent labeling of cells and tissues. We show here that one likely cause of this troublesome background labeling is that FM1-43 and FM2-10 are selective and competitive antagonists at both cloned and endogenously expressed muscarinic acetylcholine receptors. In radioligand binding studies, FM1-43 and FM2-10 bound with moderate affinity (23-220 nM) to membranes of Chinese hamster ovary (CHO) cells expressing cloned human muscarinic receptors (M1-M5). In functional studies in vitro, FM1-43 and FM2-10 inhibited elec. field stimulation (EFS) and acetylcholine-induced cholinergic contractions of guinea-pig tracheal strips (IC50: FM1-43, 0.4±0.1; FM2-10, 1.6±0.1 μM; concentration of antagonist producing a 2-fold leftward shift in the acetylcholine concentration-response curve (Kb): FM1-43, 0.3±0.1; FM2-10, 15.8±10.1 μM). Neither compound inhibited EFS-evoked, non-adrenergic, non-cholinergic nerve-mediated relaxations or contractions of the airways, or contractions mediated by histamine H1 receptor or tachykinin NK2 receptor activation. Incubating freshly excised tracheal whole-mount preps. with 5 μM FM1-43 resulted in intense fluorescence labeling of the smooth muscle that was reduced by up to 90% in the presence of selective M2 and M3 receptor antagonists. The potency of the FM dyes as muscarinic receptor antagonists is within the concentration range used to study vesicular cycling at nerve terminals. Given that muscarinic receptors play a key role in the regulation of neurotransmitter release from a variety of neurons, the anticholinergic properties of FM dyes may have important implications when studying vesicular events in the nervous system. In addition, these dyes may provide a novel tool for visualizing muscarinic receptor occupancy in living tissue or cell preps.

RE, CNT 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 8 OF 35 CAPLUS COPYRIGHT 2007 ACS ON STN
 AN 2006:608671 CAPLUS
 DN 145:836551
 TI Preparation of fused heteroaromatic quaternary ammonium salt: amino acid derivatives as novel muscarinic acetylcholine receptor antagonists
 IN Busch-Petersen, Jakob; Davis, Roderick S.; Fu, Wei; Jin, Jian; Laine, Drame Ibrahim; Palovich, Michael R.
 PA Glaxo Group Limited, UK
 SO PCT Int. Appl., 33 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
P1 WO 2006065755	A2	20060622	WO 2005-US44951	20051213
WO 2006065755	A3	20061012		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GN, GR, GU, HD, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RD, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RD, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, MD, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
PRA1 US 2004-635664P	P	20041213		
OS MARPAT 145:83655				
G1				

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The invention relates to amino acid heteroatom, derivs. I [Y is S, O or NR4 (R4 is H, alkyl, allyl); X, Z are N or CR5 (R5 is H, alkyl, alkenyl, halo, NR4, OR4, CN, NO2, CF3)], provided that N is 2 for X and 3 for Z; n is 0-3; A is halo, CF3CO2-, mesylate, tosylate, etc.; R1, R2 are (un)substituted alkyl, cycloalkyl, Ph, etc.; T is (un)substituted thiophene, furan, thiazole, isothiazole, pyrrole, imidazole, pyrazole, or Ph; R3 is acyl, carboxylic ester, sulfonyloxy, sulfonylamino, carbamoyl, etc.] for use in treating muscarinic acetylcholine receptor-mediated diseases. Thus, imidazothiazolium tyrosinamide derivative II was prepared by a multistep sequence involving reaction of 2-methylimidazo[2,1-b][1,3]thiazole-6-methanamine (preparation given) on DMB resin with Fmoc-Tyr(Bu-t)-OH (Fmoc = fluorenylmethoxycarbonyl).

L11 ANSWER 9 OF 35 CAPLUS COPYRIGHT 2007 ACS ON STN
 AN 2006:605213 CAPLUS
 DN 145:76681
 TI Muscarinic acetylcholine receptor antagonists useful in the treatment of asthma, pulmonary diseases and other diseases of respiratory tract
 IN Busch-Petersen, Jakob; Davis, Roderick S.; Fu, Wei; Jin, Jian; Laine, Dramane Ibrahim; Palovich, Michael R.
 PA Glaxo Group Limited, UK
 SO PCT Int. Appl., 20 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
P1 WO 2006065788	A2	20060622	WO 2005-US45012	20051213
WO 2006065788	A3	20060817		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, ME, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, MD, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			

PRA1 US 2004-63503P
 OS MARPAT 145:76661
 AB The invention discloses muscarinic acetylcholine receptor antagonists R3TNIC(O)NHC(CH2R1)C(O)N(R4)(CH2)nCYC (CYC = Q1, Q2; Y = S, O, NR4; X = Z, CR5 (with provisions); Z = N, CR5 (with provisions); n = 0-3; R1 = (un)branched C1-8 alkyl, C3-8 cycloalkyl, etc.; T = thiophene, furan, thiazole, etc.; R3 = COR6, COR6G, OSO2R6, etc.; R4 = H, C1-3 alkyl, allyl; R5 = H, C1-3 alkyl, halo, etc.; R6 = (un)substituted (un)branched C1-8 alkyl, C3-12 cycloalkyl, Ph, etc.) useful in treatment of respiratory tract diseases, including asthma, allergic rhinitis, pulmonary fibrosis and others.

L11 ANSWER 11 OF 35 CAPLUS COPYRIGHT 2007 ACS ON STN
 AN 2006:558688 CAPLUS
 DN 145:40272
 TI Muscarinic antagonists in combination with β 2-adrenoreceptor agonists and/or anti-inflammatories for the treatment of respiratory diseases
 IN Laine, Dramane Ibrahim; Palovich, Michael R.
 PA Smithkline Beecham Corporation, USA
 SO PCT Int. Appl., 20 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
P1 WO 2006062931	A2	20060615	WO 2005-US44033	20051205
WO 2006062931	A3	20070419		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, ME, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, MD, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, AE, EP, OA			

PRA1 US 2004-633618P
 OS MARPAT 145:8190
 GI This invention relates to a combination of (3-endo)-3-(2,2-dithienylethynyl)-8,8-dimethyl-8-azabicyclo[3.2.1]octane bromide, with one or more other therapeutic ingredients selected from β 2-adrenoreceptor agonists and inflammation inhibitors for the treatment of muscarinic acetylcholine receptor-mediated diseases of the respiratory tract. A claimed combination medication includes (3-endo)-3-(2,2-dithienylethynyl)-8,8-dimethyl-8-azabicyclo[3.2.1]octane bromide, salmeterol xinafoate, and fluticasone propionate.

L11 ANSWER 10 OF 35 CAPLUS COPYRIGHT 2007 ACS ON STN
 AN 2006:578252 CAPLUS
 DN 145:55947
 TI Muscarinic antagonists for the treatment of respiratory diseases
 IN Laine, Dramane Ibrahim; Palovich, Michael R.
 PA Smithkline Beecham Corporation, USA
 SO PCT Int. Appl., 21 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN, CNT 1

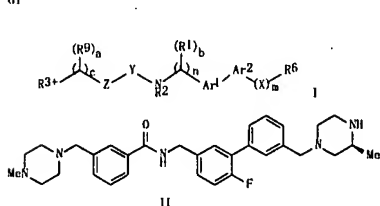
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
P1 WO 2006062883	A2	20060615	WO 2005-US43875	20051205
WO 2006062883	A3	20070329		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, ME, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, MD, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			

PRA1 US 2004-633699P
 OS MARPAT 145:55947
 AB This invention relates to derivs. of 8-azabicyclo[3.2.1]octane, pharmaceutical compns. in combination with one or more other therapeutic ingredients, such as β 2-adrenoreceptor agonists, antihistamines, allergy inhibitors, and inflammation inhibitors for the treatment of muscarinic acetylcholine receptor-mediated diseases of the respiratory tract. A claimed combination medication includes (3-endo)-3-(2,2-dithienylethynyl)-8,8-dimethyl-8-azabicyclo[3.2.1]octane bromide, salmeterol xinafoate, and fluticasone propionate.

L11 ANSWER 12 OF 35 CAPLUS COPYRIGHT 2007 ACS ON STN
 AN 2006:494266 CAPLUS
 DN 145:8190
 TI Preparation of N-[(piperazinylmethyl)phenyl]benzamide derivatives as M3 muscarinic acetylcholine receptor antagonists
 IN Budzik, Brian; Jin, Jian; Laine, Dramane; McClelland, Brent; Palovich, Michael; Rivero, Ralph; Wang, Yonghui; Xie, Heibo; Zhu, Chongjie; Cooper, Anthony
 PA Glaxo Group Limited, UK
 SO PCT Int. Appl., 106 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
P1 WO 2006055553	A2	20060526	WO 2005-US41346	20051115
WO 2006055553	A3	20060908		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, ME, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, MD, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			

PRA1 US 2004-627986P
 OS MARPAT 145:8190

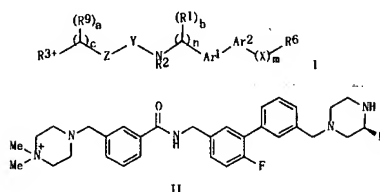


AB Title compds. I [wherein Ar1, Ar2 = independently (un)substituted Ph or monocyclic heteronaryl; R6 = (un)substituted amine; X = C(R1) when n = 0-3; X = CO when n = 1; n = 0-2; b = 0-2; c = 0-3; n = 0-3; Y = CO, SO, SO2, HNC(O) or OC(O); Z = (un)substituted (hetero)aryl, alkenyl, alkyl, etc.; R1, R2, R9 = independently H, (un)substituted (cyclo)alkyl, heterocyclyl, etc.; R3 = (un)substituted N+ containing cyclyl; or pharmaceutically acceptable salts thereof] were prepared as M3 muscarinic acetylcholine receptor antagonists. For instance, solid-phase synthesis of 11-4CF3CO2H was realized in an overall yield of 52% via (1) amination of DMIB (2,6-dimethoxy-4-polystyrenebenzoyloxybenzaldehyde) resin-bound 3-bromo-4-fluorobenzylamine with 3-formylbenzoic acid; (2) reductive amination with 1-methylpiperazine; (3) Pd-catalyzed coupling with 3-formylphenylboronic acid; (4) reductive amination with (S)-2-methylpiperazine; (5) methylation

L11 ANSWER 12 OF 35 CAPLUS COPYRIGHT 2007 ACS ON STN (Continued)
with MeI; and (c) cleavage from the resin with TFA. Biol. assay for
inhibition of receptor activation by calcium mobilization and
pharmaceutical formulations were described. 1 and pharmaceutical compns.
are potentially useful for the treatment of muscarinic
acetylcholine receptor-mediated diseases, such as respiratory tract
disorders.

L11 ANSWER 13 OF 35 CAPLUS COPYRIGHT 2007 ACS ON STN
 AN 2006:494067 CAPLUS
 DN 145:8188
 T1 Preparation of N-[(piperazinylmethyl)biphenyl] benzamides as m3
 muscarinic acetylcholine receptor antagonists
 IN Brum K. J.; Jia; Laine, Dianne I.; Palovich,
 TA Michael R.; Rivero, Ralph A.; Wang, Yonghui; Xie, Haijiao
 PA Glaxo Group Limited, UK
 S0 PCT Int. Appl., 63 pp.
 S0 PCT No. P1XX02.

DT	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2006055033	A2	20060526	WO 2005-US41230	20051115
	WO 2006055033	A3	200609803		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BY, BZ, CA, CH, CN, CO, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GE, GH, GM, GU, HK, HU, ID, IL, IN, IS, JP, KE, KM, KP, KR, KZ, LC, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SN, SZ, TH, TN, TR, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, CG, CF, CI, CM, GA, GD, GE, GM, GU, HT, IL, IN, IS, JP, KE, KM, KP, KR, KZ, LG, KE, LS, MD, NA, NZ, SD, SZ, TZ, UG, ZM, AZ, BY				
	EP 1827439	A2	20070905	EP 2005-851625	20051115
	R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, HR				
PRAI	US 2004-627822P	P	20051115		
OS	WO 2005-US41230	P	20051115		
	WARPAT 145-8198				

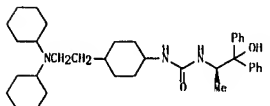


AB Title compds. 1=U- [wherein Ar1, Ar2 = independently (un)substituted Ph or monocyclic heteroaryl; R6 = (un)substituted amine; X = C(R1) when m = 0-3; X = CO when m = 1; a = 0-2; b = 0-2; c = 0-3; n = 0-3; Y = CO, SO, SO2, HNC(O) or OC(O); Z = (un)substituted (hetero)aryl, alkenyl, alkyl, etc.; R1, R2, R9 = independently H, (un)substituted (cyclo)alkyl, heterocyclyl, etc.; R3 = (un)substituted N+ containing cyclyl; U =

L11 ANSWER 13 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN. (Continued)
pharmaceutically acceptable counter ions, i.e., Br⁻, Cl⁻, F⁻, CF₃CO₂⁻, mesylate and tosylate; or pharmaceutically acceptable salts thereof] were
pred. as M3 muscarinic acetylcholine receptor antagonists. For
the solid state synthesis of 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821,

LI1 ANSWER 14 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1906:437585 CAPLUS
DN 144:467911
TI Preparation of diphenylalkyl cyclohexyl urea derivatives as
T1 5-phenyl-2-phenylmethyl-1-cyclohexyl-urea receptor antagonists
IN Busch-Pedersen, Jakob; Boehm, Jeffrey Charles; Li, Huijie;
Taggart, John J.; Yan, Hongxing
PA Glaxo Group Limited, UK
SO PCT Int. Appl., 79 pp.
CONF: PIXXD2

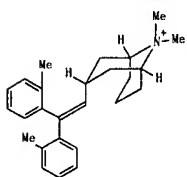
DT LA FAN.	Patent English CNT 1	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
P1	WO 2006050239	A2	20060511	WO 2005-US39209	20051027	
	WO 2006050239	A3	20061012			
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CZ, DE, DK, DM, DO, DZ, EE, EG, ES, FI, GB, GR, GU, HK, HN, HU, IL, IN, JP, KE, KG, KM, KN, KP, KR, KZ, LK, LR, LS, LT, LU, LV, LY, MA, MC, MG, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SN, ST, SV, SY, TJ, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RY: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LT, LU, LV, MA, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, CA, GN, GW, ML, MR, NE, NG, SN, TO, TG, TW, BW, GH, GM, KE, LS, MW, MY, NC, ND, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, AU, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CZ, DE, DK, DM, DO, DZ, EE, EG, ES, FI, GB, GR, GU, HK, HN, HU, IL, IN, JP, KE, KG, KM, KN, KP, KR, KZ, LK, LR, LS, LT, LU, LV, LY, MA, MC, MG, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SN, ST, SV, SY, TJ, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW					
EP 1824483	R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LT, LU, LV, MA, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, CA, GN, GW, ML, MR, NE, NG, SN, TO, TG, TW, BW, GH, GM, KE, LS, MW, MY, NC, ND, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, AU, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CZ, DE, DK, DM, DO, DZ, EE, EG, ES, FI, GB, GR, GU, HK, HN, HU, IL, IN, JP, KE, KG, KM, KN, KP, KR, KZ, LK, LR, LS, LT, LU, LV, LY, MA, MC, MG, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SN, ST, SV, SY, TJ, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW	A2	20070829	EP 2005-824984	20051028	
PRA1	US 2004-623558	P	20041029			
	WO 2005-US39209	P	20051027			
OS	MARPAT 144:46791					



AB Muscarinic acetylcholine receptor antagonists are prepared. E.g., **1** was prepared by a series of reactions starting with *tert*-Bu-[4-(2-oxoethyl)cyclohexyl]carbamate and dicyclohexylamine. In vitro and in vivo functional assays for muscarinic acetylcholine receptor inhibitory activity are given. Also pharmaceutical formulations are given.

L11 ANSWER 15 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
 AN 2006:152777 CAPLUS
 DN 144:226317
 TI Preparation of axoniabicyclo[3.3.1]nonanes as muscarinic
 acetylcholine receptor antagonists
 IN Busch-Petersen, Jakob; Palovich, Michael; Laine,
 Dramane Ibrahim
 PA Glaxo Group Limited, UK
 SO PCT Int. Appl., 29 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN, CNT 1

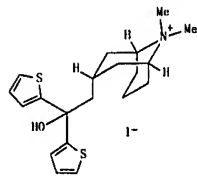
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2006017767	A2	20060216	WO 2005-US27957	20050805
WO 2006017767	A3	20060526		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
EP 1781103	A2	20070509	EP 2005-783731	20050805
R:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, HR			
PRAI US 2004-600213P	P	20040806		
WO 2005-US27957	W	20050805		
OS MARPAT 144:226317				
GI				



AB Muscarinic acetylcholine receptor antagonists and methods of using them are provided. E.g., I was prepared by quaternization of 3-(2-bis(2-methylphenyl)ethenyl)-9-methyl-9-azabicyclo[3.3.1]nonane (II) with MeI. II was prepared by reaction of 2-(9-methyl-9-azabicyclo[3.3.1]non-3-yl)-1,1-bis(2-methylphenyl)ethanol with HCl. Biol. examples include anal. of inhibition of receptor activation by Ca mobilization, muscarinic receptor radioligand binding assays, and evaluation of

L11 ANSWER 16 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
 AN 2006:147697 CAPLUS
 DN 144:226314
 TI Preparation of axoniabicyclo[3.3.1]nonane derivatives as muscarinic acetylcholine receptor antagonists
 IN Busch-Petersen, Jakob; Davis, Roderick S.; Laine, Dramane Ibrahim; Neipp, Christopher E.; Palovich, Michael R.
 PA Glaxo Group Limited, UK
 SO PCT Int. Appl., 37 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2006017768	A2	20060216	WO 2005-US27958	20050805
WO 2006017768	A3	20060608		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
EP 1781104	A2	20070509	EP 2005-783735	20050805
R:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, HR			
PRAI US 2004-600538P	P	20040805		
WO 2005-US27958	W	20050805		
OS CASREACT 144:226314; MARPAT 144:226314				
GI				

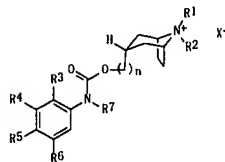


AB Muscarinic acetylcholine receptor antagonists and methods of using them are provided. E.g., I was prepared by quaternization of 2-((3-endo)-9-methyl-9-azabicyclo[3.3.1]non-3-yl)-1,1-di-2-thienylethanol (II) with MeI. II was prepared from Et ((3-endo)-9-methyl-9-azabicyclo[3.3.1]non-3-yl)acetate and 2-thienyllithium. Biol. examples include anal. of inhibition of receptor activation by Ca mobilization, muscarinic receptor radioligand binding assays, and evaluation of potency and duration of action in isolated guinea pig trachea.

L11 ANSWER 15 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
 potency and duration of action in isolated guinea pig trachea.

L11 ANSWER 17 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
 AN 2006:29466 CAPLUS
 DN 144:128867
 TI Preparation of axoniabicyclo[3.2.1]octanes for use as muscarinic acetylcholine receptor antagonists in treating respiratory disease
 IN Cooper, Anthony William James; Laine, Dramane I.; Palovich, Michael R.; Thomas, Sonia M.
 PA Glaxo Group Limited, UK
 SO PCT Int. Appl., 47 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN, CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2006005057	A2	20060112	WO 2005-US23743	20050630
WO 2006005057	A3	20060928		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
EP 1765339	A2	20070328	EP 2005-768142	20050630
R:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, LV, MK, YU			
PRAI US 2004-584011P	P	20040630		
WO 2005-US23743	W	20050630		
OS MARPAT 144:128867				
GI				



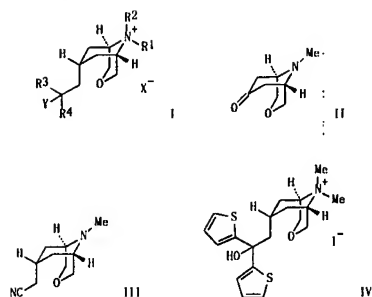
AB This invention relates to biaryl 8-axoniabicyclo[3.2.1]octane compds. I (Y= (unsubstituted) thiophene; R1 and R2 = a bond, H, and C1-4 alkyl; R3, R4, R5 and R6 = H, halogen, NO2, CN, C1-10-alkyl, C2-10 alkenyl, C1-10-alkoxy, etc.; R7 = H and C1-4 alkyl; X = a physiol. acceptable anion, such as chloride, bromide, and iodide; n = 0 or 1), pharmaceutical compns., and use thereof in treating muscarinic acetylcholine receptor mediated diseases of the respiratory tract. I can be prepared via the Curtius reaction of a suitable substituted 2-bromobenzoic acid with the suitably protected [3.2.1] bicyclic alc.; the resulting intermediate is coupled to a suitable boronic acid and the protecting group removed. No biol. data is given in the patent.

L11 ANSWER 17 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

L11 ANSWER 18 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
 AN 2005:1311319 CAPLUS
 DN 144:51593
 TI 3-Oxa-9-azoniabicyclo[3.3.1]nonanes as muscarinic acetylcholine receptor antagonists, their preparation, pharmaceutical compositions, and use in therapy
 IN Busch-Petersen, Jakob; Neipp, Christopher E.; Palovich, Michael R.
 PA Glaxo Group Limited, UK
 SO PCT Int. Appl., 30 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN. CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005118594	A1	20051215	WO 2005-US18563	20050526
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, GU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SV, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1749012	A1	20070207	EP 2005-753818	20050526
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, UR, LV				
US 2007232599	A1	20071004	US 2006-568909	20061110
PRA1 US 2004-575329P	P	20040528		
WO 2005-US18563	W	20050526		
OS CASREACT 144:51593; NARPAT 144:51593				
GI				

L11 ANSWER 18 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

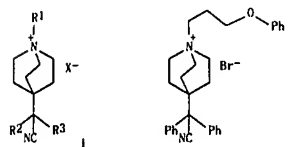


AB The invention relates to a group of 3-oxa-9-azoniabicyclo[3.3.1]nonanes I, which are antagonists of muscarinic acetylcholine receptors (mAChRs). In compds. I, R1 and R2 are independently selected from H, C1-12 alkyl, C2-10 alkenyl, C3-6 cycloalkyl-C1-6 alkyl, aryl-C1-10 alkyl, hydroxy-C1-10 alkyl, cyano-C1-6 alkyl, halo-C1-10 alkyl, (trifluoroethyl)-C1-6 alkyl, C1-6 alkoxyalkyl, and methoxy-C1-6 alkoxy-C1-6 alkyl; R3 and R4 are independently selected from C1-6 alkyl, C5-6 cycloalkyl, C6-10 cycloalkylalkyl, 2-thienyl, (un)substituted aryl, (un)substituted C5-6 heteroaryl having N or O as the heteroatom, C5-6 heterocyclyl having N or O as the heteroatom, and C6-10 heterocyclylalkyl having N or O as the heteroatom; Y is OH or cyano; and X⁻ is a physiologically acceptable anion associated with the pos. charge of the N atom, including chloride, bromide, iodide, hydroxide, sulfate, nitrate, phosphate, acetate, trifluoroacetate, fumarate, citrate, tartrate, oxalate, succinate, mandelate, methanesulfonate, p-toluenesulfonate, etc.; and the side chain indicated may have either endo or exo orientation, but is preferred with endo. The invention also relates to the preparation of I, pharmaceutical compns. comprising a compound I and a pharmaceutically acceptable carrier, as well as to the use of the compns. for the treatment of mAChR-mediated diseases of the respiratory tract. Horner-Emmons reaction of 9-methyl-3-oxa-9-azoniabicyclo[3.3.1]nonan-7-one (II) with di-Et (cyanomethyl)phosphonate and stereoselective hydrogenation gave endo-nitrile III, which underwent hydrolysis to the Et ester followed by addition of 2-thienyllithium and N-alkylation with Me iodide to give iodide IV. The compds. of the invention are antagonists of mAChRs (no data).

RE. CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 19 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
 AN 2005:1259696 CAPLUS
 DN 144:22816
 TI Preparation of quinuclidine salts as muscarinic acetylcholine receptor antagonists for use against respiratory tract diseases
 IN Laine, Dramane I.; McClelland, Brent W.; Neipp, Christopher E.; Palovich, Michael R.
 PA Glaxo Group Limited, UK
 SO PCT Int. Appl., 32 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN. CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005112644	A2	20051201	WO 2005-US16148	20050510
WO 2005112644	A3	20060330		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, GU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SV, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1747219	A2	20070131	EP 2005-742935	20050510
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, UR, LV				
US 2007173646	A1	20070726	US 2006-568930	20061110
PRA1 US 2004-570581P	P	20040513		
WO 2005-US16148	W	20050510		
OS CASREACT 144:22816; NARPAT 144:22816				
GI				



AB Quinuclidine salts (shown as I; variables defined below: e.g. 4-(cyanodiphenylmethyl)-1-[3-(phenylthio)propyl]-1-azoniabicyclo[2.2.2]octane bromide (shown as II)) as muscarinic acetylcholine receptor antagonists (no data) and methods of using them are provided. Methods of preparation are claimed and preps. and/or characterization data for 13 examples of I are included. For example, II was prepared in 79 % yield by quaternization with 3-bromopropyl Ph ether of 2-((1-azoniabicyclo[2.2.2]oct-4-yl)-2,2-diphenylacetone)nitrile, which was prepared in 60 % yield from (1-azoniabicyclo[2.2.2]oct-4-yl)diphenylmethanol (preparation described) and TMSCN in 1,2-dichloroethane in the presence of AlCl₃. For I: R1 = a bond, H, C1-15 alkyl, halo-substituted C1-15 alkyl, aryl C1-15 alkyl, C1-15 alkyloxyalkyl, cycloalkyl, C2-15 alkenyl,

L11 ANSWER 19 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
 hydroxy-substituted C1-15 alkyl, C1-15 alkylaryl, (CR7R7)qORa,
 (CR7R7)qNRa, (CR7R7)qC(O)Ra, (CR7R7)qC(O)NRa, (CR7R7)qC(O)Ra,
 heterocyclylalkyl, heterocyclyloxyalkyl; and R2 and R3 = aryl, aryl C1-4
 alkyl, C1-4 alkylaryl, heteroaryl, heteroaryl C1-4 alkyl, C1-4
 alkylheteroaryl, heterocyclyl, C1-4 alkylheterocyclyl and heterocyclyl
 C1-4 alkyl; Ra = H, C1-15 alkyl, C1-15 alkoxy, aryl, aryl C1-15-alkyl,
 heteroaryl, heteroaryl C1-15 alkyl, heterocyclyl and heterocyclyl C1-15
 alkyl; q is 0-15; n = 1-14; m = 1-15; p = 1-4; and X = a physiol.
 acceptable anion; addnl. details are given in the claims.

L11 ANSWER 20 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
 AN 2005:1206309 CAPLUS
 DN 143:460035
 TI 4-[Hydroxy(diaryl)methyl]-1-azabicyclo[2.2.2]octanium bromides as
 muscarinic acetylcholine receptor antagonists, their preparation,
 pharmaceutical compositions, and use in therapy
 IN Laine, Dramane I.; Palovich, Michael R.;
 McClelland, Brent W.; Neipp, Christopher E.; Thomas, Sonia M.
 PA Glaxo Group Limited, UK
 SO PCT Int. Appl. 96 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005104745	A2	20051110	WO 2005-US14386	20050427
WO 2005104745	A3	20060803		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, GU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, CH, CM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, BG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
AU 2005237576	A1	20051110	AU 2005-237576	20050427
CA 2564742	A1	20051110	CA 2005-2564742	20050427
EP 1740177	A2	20070110	EP 2005-746609	20050427
R:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, LV, MK, YU			
CN 1976701	A	20070606	CN 2005-80021536	20050427
BR 2005010170	A	20071002	BR 2005-10170	20050427
IN 2006DN05413	A	20070810	IN 2006-DN5413	20060919
MX 2006PA12405	A	20070117	MX 2006-PA12405	20061026
KR 2007015412	A	20070202	KR 2006-722276	20061026
NO 200605417	A	20061229	NO 2006-5417	20061124
US 2007185155	A1	20070809	US 2007-568330	20070503
US 2007249664	A1	20071025	US 2007-774867	20070709
PRAI US 2004-565623P	P	20040427		
WO 2005-US14386	W	20050427		
US 2007-568330	A1	20070503		
CASREACT 143:460035; MARPAT 143:460035				
OS GI				

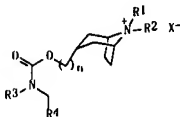
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The invention relates to 4-[hydroxy(diaryl)methyl]-quinuclidinium bromides of formula I, which are muscarinic acetylcholine receptor antagonists. In compds. I, R1 is selected from C1-15 alkyl, halo-substituted C1-15 alkyl, C1-15 alkyl-cycloalkyl, cycloalkyl, C2-15 alkanyl, C1-15 alkyl-aryl, etc.; R2 and R3 are independently selected from (un)substituted aryl, (un)substituted C1-4 alkyl-aryl, (un)substituted

L11 ANSWER 20 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
 heteroaryl, (un)substituted C1-4 alkyl-heteroaryl, (un)substituted
 heterocyclyl, and (un)substituted C1-4 alkyl-heterocyclyl; and X⁻ is a
 physiol. acceptable anion, such as chloride, bromide, iodide, hydroxide,
 sulfate, nitrate, phosphate, acetate, trifluoroacetate, fumarate, citrate,
 tartrate, oxalate, succinate, mandelate, methanesulfonate, and
 p-toluenesulfonate. The invention also relates to the prepn. of I,
 pharmaceutical compns. comprising a compd. I and a pharmaceutically
 acceptable carrier, as well as to the use of the compns. for the treatment
 of muscarinic acetylcholine receptor-mediated diseases via nasal
 or oral inhalation. Substitution of 3-fluorobenzyl bromide with ethylene
 glycol followed by bromination gave 2-bromoethyl ether II, which underwent
 substitution with 1-azabicyclo[2.2.2]oct-4-yl(diphenyl)methanol (III)
 resulting in the formation of quinuclidinium bromide IV. The compds. of
 the invention inhibit muscarinic M3 receptors (no data).

L11 ANSWER 21 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
 AN 2005:1154378 CAPLUS
 DN 143:422258
 TI Preparation of 8-azoniabicyclo[3.2.1]octane carbamates as
 muscarinic acetylcholine receptor antagonists.
 IN Laine, Dramane I.; Palovich, Michael R.; Xie, Haibo;
 Buffet, Noemie
 PA Glaxo Group Limited, UK
 SO PCT Int. Appl. 67 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN CNT 1

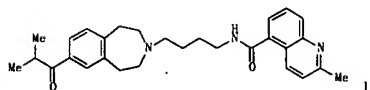
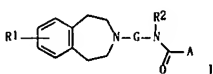
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005099706	A2	20051027	WO 2005-US11975	20050407
WO 2005099706	A3	20060511		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, GU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, CH, CM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, BG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
EP 1732923	A2	20061220	EP 2005-737620	20050407
R:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, HR, LV			
US 2007238751	A1	20071011	US 2006-599717	20061006
PRAI US 2004-560155P	P	20040407		
WO 2005-US11975	W	20050407		
MARPAT 143:422258				
OS GI				



AB Title compds. [I: R1 = bond, H, alkyl; R2 = H, alkyl, haloalkyl, cyanoalkyl, alkenyl, cycloalkenyl, alkylcycloalkyl, cycloalkylalkyl, etc.; R3, R4 = (substituted) Ph, thienyl, furyl, cycloalkyl; n = 0-2; X⁻ = pharmaceutically acceptable counterion], were prepared for treatment of chronic obstructive pulmonary disease, chronic bronchitis, asthma, chronic respiratory obstruction, pulmonary fibrosis, emphysema, and allergic rhinitis (no data). Thus, (3-endo)-8-azoniabicyclo[3.2.1]oct-3-ylmethyl [(2-fluorophenyl)methyl]-2-thienylcarbamate trifluoroacetate (preparation given) was stirred with MeBr and NaHCO₃ in CH₂Cl₂/Me₂CO for 16 h to give (3-endo)-3-[[[(2-fluorophenyl)methyl]-(2-thienyl)amino]carbonyloxy]methyl]-8,8-dimethyl-8-azoniabicyclo[3.2.1]octane bromide.

LI1 ANSWER 22 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
 AN 2005:1103585 CAPLUS
 DN 143:386758
 TI Preparation of benzazepines as muscarinic acetylcholine receptor antagonists
 IN Busch-Petersen, Jakob; Cooper, Anthony W. J.; Laine, Dramann I.; Palovich, Michael R.; Davis, Roderick S.; Fu, Wei
 PA Glaxo Group Limited, UK
 SD PCT Int. Appl., 47 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005094834	A1	20051013	WO 2004-US8026	20040317
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1725240	A1	20061129	EP 2004-821845	20040317
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LI, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, LT, LV				
JP 2007529512	T	20071025	JP 2007-503876	20040317
US 2007185090	A1	20070809	US 2006-598887	20060914
PRA1 WO 2004-US8026	W	20040317		
OS CASREACT 143:386758; MARPAT 143:386758				
G1				

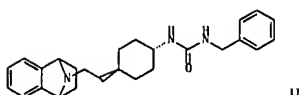
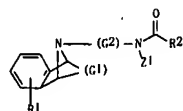


AB Title compds. 1 [R1 = (un)substituted alkanoyl, aroyl and aroylalkyl; G = alkyl, substituted cyclohexyl or alkylamide; R2 = H or alkyl; A = (un)substituted alkyl, X-Ar, CH=CH-Ar, etc.; X = bond, O, S, etc.; Ar = (un)substituted Ph, aromatic heterocycle or bicyclic heterocycle] and their

LI1 ANSWER 22 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
 pharmaceutically acceptable salts, are prepd. and disclosed as antagonists of muscarinic acetylcholine receptors. Thus, e.g., 11 was prepd. by cyclization of 3-aminobenzoic acid with sodium 3-nitrobenzene sulfonate and subsequent amidation/oxidn. sequence using 4-amino-1-butanol followed by coupling with 2-methyl-1-(2,3,4,5-tetrahydro-1H-3H-benzazepin-7-yl)-propan-1-one (prepn. given). The inhibitory activity of 1 was evaluated using receptor-activated calcium mobilization assay (no data). 1 as antagonist of muscarinic acetylcholine receptor should prove useful in the treatment of chronic obstructive lung disease, chronic bronchitis and asthma. Pharmaceutical compns. comprising 1 are disclosed.
 RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE.FORMAT

LI1 ANSWER 23 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
 AN 2005:1103428 CAPLUS
 DN 143:386757
 TI Preparation of arylcyclohexyl amides and ureas as M3 muscarinic acetylcholine receptor antagonists
 IN Busch-Petersen, Jakob; Cooper, Anthony W. J.; Laine, Dramann I.; Palovich, Michael R.; Wan, Zehong; Yan, Hongxing; Zhu, Chongjie
 PA Glaxo Group Limited, UK
 SD PCT Int. Appl., 79 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005094251	A2	20051013	WO 2004-US8025	20040317
WO 2005094251	A3	20060330		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1725238	A2	20061129	EP 2004-821844	20040317
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LI, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, LT, LV				
JP 2007529511	T	20071025	JP 2007-503875	20040317
US 2007185148	A1	20070809	US 2006-598885	20060914
PRA1 WO 2004-US8025	W	20040317		
OS MARPAT 143:386757				
G1				

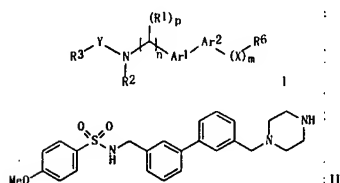


LI1 ANSWER 23 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

AB Title compds. 1 [Z1 = H or alkyl; R1 = H, halo, C(0)aryl, etc.; G1 = CH2CH2 or CH=CH; G2 = alkyl or substituted cyclohexyl; R2 = XAr, XAr1Ar2 or NR3Z(Ar)n; X = bond, NR3 or alkyl; R3 = H (un)substituted alkyl or alkylaryl; Z = (un)substituted alkyl or alkyl-Y2 or Z and R3 or Z and Ar may form 4-7 membered ring; Ar = (un)substituted aryl, aromatic heterocycle, heterobicyclic ring system, etc.; Ar1 and Ar2 independently = (un)substituted Ph or aromatic heterocycle; Y = bond, NHC(=O), CONH, etc.; Y2 = NR3, O, S, etc.; n = 0-3] and their pharmaceutically acceptable salts, are prepared and disclosed as antagonists of M3 muscarinic acetylcholine receptors. Thus, e.g., 11 was prepared by coupling of 1,2,3,4-tetrahydro-1,4-epiazano-naphthalene with [4-(2-oxo-ethyl)-cyclohexyl]-carbamic acid tert-Bu ester followed by deprotection and subsequent benzylation using benzyl isocyanate. The inhibitory activity of 1 was evaluated using receptor-activated calcium mobilization assay (no data). 1 as antagonist of M3 muscarinic acetylcholine receptor should prove useful in the treatment of chronic obstructive lung disease, chronic bronchitis and asthma. Pharmaceutical compns. comprising 1 are disclosed.

L11 ANSWER 24 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
 AN 2005:1021524 CAPLUS
 DN 143:326392
 TI Preparation of biaryl amines as M3 muscarinic acetylcholine
 receptor antagonists
 IN Budzik, Brian W.; Cooper, Anthony W. J.; Corbett, David Francis;
 Jin, Jien; Laine, Dramane I.; Wang, Yonghui; Moore, Michael Lee;
 Rivero, Ralph A.; Shi, Dongchuan; Wang, Feng; Xie, Haibo; Zhu, Chongjie
 Glaxo Group Limited, UK; et al.
 PA PCT Int. Appl., 101 pp.
 SO CODEN: PIXXD2
 DT Patent
 LA English
 FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005087236	A1	20050922	WO 2005-US8302	20050311
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, CN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1725236	A1	20061129	EP 2005-725459	20050311
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, HR, LV				
JP 2007528420	T	20071011	JP 2007-503080	20050311
PRAI US 2004-552106P	P	20040311		
WO 2005-US8302	W	20050311		
OS MARPAT 143:326392				
GI				



AB Title comps. I [wherein Ar1, Ar2 = (un)substituted Ph or monocyclic heteroaryl; R6 = (un)substituted amine; X = C(R1)p when m = 0-3; X = CO when m = 1; p = 0-2; n = 0-3; Y = CO, SO, SO2, HNC(O) or OC(O); R1, R2 = H, (un)substituted alkyl, etc.; R3 = (un)substituted (hetero)aryl, etc., or pharmaceutically acceptable salts thereof] were prepared as M3 muscarinic acetylcholine receptor antagonists. For instance, solid-phase synthesis of II-2CF3COOH was realized in an overall

L11 ANSWER 24 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
 yield of 46% on 2,6-dimethoxy-4-polystyrenebenzylaldehyde (DMIB resin), via (1) reductive amination with 3-bromobenzylamine hydrochloride; (2) N-sulfonation with 4-methoxybenzenesulfonyl chloride; (3) Pd-catalyzed coupling with 3-formylphenylboronic acid; (4) reductive amination with N-Bocpiperazine; and (5) cleavage from the resin with TFA. No biol. data were given. I and pharmaceutical comps. are potentially useful for the treatment of muscarinic acetylcholine receptor-mediated diseases, such as respiratory tract disorders.
 RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 25 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
 AN 2005:673020 CAPLUS
 DN 143:172762
 TI Preparation of 8-azabicyclo[3.2.1]octane derivatives as muscarinic
 acetylcholine receptor antagonists
 IN Laine, Dramane I.; Palovich, Michael R.; Preston,
 Alexander G.; Cooper, Anthony William James
 Glaxo Group Limited, UK
 PA PCT Int. Appl., 87 pp.
 SO CODEN: PIXXD2
 DT Patent
 LA English
 FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005067537	A2	20050728	WO 2005-US1333	20050113
WO 2005067537	A3	20060518		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, SM				
RW: BW, GH, GM, KE, LS, MW, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, CN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2005204935	A1	20050728	AU 2005-204935	20050113
CA 2552880	A1	20050728	CA 2005-2552880	20050113
EP 1711183	A2	20061018	EP 2005-711495	20050113
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, IS, YU				
CN 1929844	A	20070314	CN 2005-80008126	20050113
BR 2005060777	A	20070522	BR 2005-6777	20050113
JP 2007518740	T	20070712	JP 2006-549649	20050113
IN 2006DN03964	A	20070427	IN 2006-DN3964	20060710
MX 2006PA07958	A	20061107	MX 2006-PA7958	20060712
NO 2006003635	A	20061004	NO 2006-3636	20060811
PRAI US 2004-536092P	P	20040113		
WO 2005-US1333	W	20050113		
OS MARPAT 143:172762				
GI				

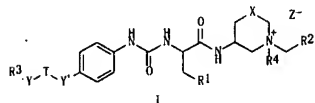
L11 ANSWER 25 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
 CHCl3 was treated with diphenylphosphoryl azide in CHCl3 and the soln. was reacted with II and p-TsOH to give desired carbamate III.

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The author prepared several azabicyclo[3.2.1]octane derivs. I [A = (CH2)n, n = 0, 1; R1, R2 = bond, H, Me; R3 = H, Cl-C4 alkyl; R4, R5 = H, halo, Cl-C4 alkyl, C2-C4 alkyl, (CR92)qORa, (CR92)qNCORa; R6, R7, R8 = H, halo, cyano, Cl-C4 alkyl, C2-C4 alkyl, C1-C4 alkox, (CR92)qORa, (CR92)qNCORa; R6R7 or R7R8 = 5-, 6-membered ring; Ra = H, Cl-C4 alkyl; R9 = H, Cl-C4 alkyl; q = 0-4; X = Cl, Br, iodo, OH, SO3, NO2, etc.] to be used as muscarinic acetylcholine receptor antagonists, specifically for treating asthma, chronic obstructive lung disease, chronic bronchitis, chronic respiratory obstruction, pulmonary fibrosis, pulmonary emphysema, and allergic rhinitis via inhalation of a pharmaceutical composition of the compound. To illustrate the synthesis, 8-(phenylmethyl)-8-azabicyclo[3.2.1]octan-3-one reacted with methyltriphenylphosphonium bromide to give the 3-methylidene compound which was treated with dialkylborane followed by removal of the benzyl group and protection with Boc to give ester II. 3-Trifluoromethyl-2-biphenylcarboxylic acid in

L11 ANSWER 26 OF 35 CAPLUS COPYRIGHT 2007 ACS ON STN (Continued)
(furyl), pyridinyl, etc.; R4 is alkyl, cycloalkyl or cycloalkylalkyl; Z is a pharmaceutically-acceptable ion, e.g., halide, trifluoroacetate, mesylate or tosylate) were prep'd. as muscarinic acetylcholine receptor antagonists. Thus, N-[(3S)-1-[(3,4-dimethoxyphenyl)methyl]-1-methyl-3-piperidinium]N-[(14)-[(2,5-dimethyl-3-thienyl)sulfonyloxy]phenyl]amino]carbonyl-L-tyrosinamide trifluoroacetate was prep'd. by a multistep procedure in solid phase.

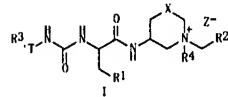
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005055941	A2	200506263	WO 2004-USA40668	20041203
WO 2005055941	A3	200606216		
W:	AE, AG, AI, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CZ, DE, DK, DM, DZ, EC, EG, ES, FI, GB, GE, GH, GM, GU, HK, HU, IL, IN, JP, KE, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NZ, NO, NZ, OM, PG, PH, PT, RO, RU, SC, SD, SE, SG, SK, SL, SV, TJ, TN, TR, TT, TZ, UA, UG, US, UZ, VV, YU, ZA, ZM, ZW			
RW:	BH, CM, CY, CZ, DE, DK, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CN, GA, GN, GW, ML, MR, NE, SN, TD, TG			
AU 2004296208	A1	200506263	AU 2004-296208	20041203
CA 2549273	A1	200506263	CA 2004-2549273	20041203
EP 1496327	A2	200606830	EP 2004-813056	20041203
R: AT, BE, AT, BH, DE, DK, ES, FR, GB, GT, IT, LI, LU, NL, SE, MC, PT, IE, SI, LY, LV, FI, RO, MK, VN, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, RS, TU				
CN 1913895	A	20070214	CN 2004-80041273	20041203
BR 2004017343	A	20070313	BR 2004-17343	20041203
JP 200513182	T	200705254	JP 2006-542826	20041203
MX 20060606256	A	200606832	MX 2006-P46256	20060682
US 2006030161	A	200707824	IN 2006030161	20060682
NO 2006060322	A	200606830	NO 2006-30322	20060682
US 2007179180	A1	20070802	US 2007-581129	20070315
PRAI US 2003-526766P	P	20031203		
WO 2004-USA40668	W	20041203		
OS MARPAT 413-76480				



111 ANSWER 27 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

111 ANSWER 27 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAT. NO.	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
P1	WO 2005055940	A2	2005082623	WO 2004-046667	20041203
	WO 2005055940	A3	2005091515		20041203
	W: AE, AG, AL, AM, AN, AT, AU, BA, BB, BG, BR, BV, BY, BZ, CA, CH, CN, CO, CZ, DE, DK, DZ, EA, EG, EE, EG, ES, FI, GB, GD, GE, GR, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, LK, LR, LS, LT, LU, LV, MA, MD, MG, MN, MW, MX, NA, NZ, OM, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SN, TJ, TM, TN, TR, TT, TZ, UA, UG, UY, UZ, VA, VN, ZM, ZW, RW: BW, GH, GM, KE, LS, MW, MY, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AE, BV, KG, KZ, MD, NJ, TJ, TM, AT, BE, BG, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 2004296207	A1	2005062623	AU 2004-296207		20041203
CA 2549272	A1	2005062623	CA 2004-2549272		20041203
EP 1708702	A1	200610111	EP 2004-183055		20041203
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, SI, SK, TR, UA, UG, UY, UZ, VA, VN, ZM, ZW, RW: BW, GH, GM, KE, LS, MW, MY, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AE, BV, KG, KZ, MD, NJ, TJ, TM, AT, BE, BG, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
BR 2004071215	A	200707221	BR 2004-17215		20041203
JP 2005113181	T	200705254	JP 2006-542825		20041203
IN 2006003111	A	200607824	IN 2006-03111		20060331
MX 20060406372	A	20060823	MX 2006-0406372		20060505
US 20060202992	A	200606287	US 2006-2992		20060627
US 2007179184	A	200708202	US 2007-581230		20070317
PRAI 10 2003-526824P	P	20031023			
WO 2004-040667	W	20041203			
OS	CASREACT 143: 78479; MARPAT 143: 78479				



AB Amino acid deriva. [X is null or CH₂; R3-R5 are (un)substituted Ph, thiophenyl, furanyl, pyridinyl, etc.; R1, R2 are independently (un)substituted alkyl, cycloalkyl or phenyl; R4 is alkyl, cycloalkyl or cycloalkylalkyl; Z- is a pharmacologically-acceptable ion, e.g., halide, trifluoromethanesulfonyl, mesylate or tosylate] were prepared as muscarinic acetylcholine receptor antagonists. Thus, N-(3S)-1-[3-(4-bromophenyl)ethyl]-N-(2S)-1-(2S)-1-pyrrolidinyl-N-[15-(5-oxo-1-oxocarbonyl)-2-furanyl]amino]propan-2-yl-L-proline-2S trifluoromethanesulfonate was prepared by a multi-step procedure in solid phase.

LI1 ANSWER 28 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
 AN 2005:451115 CAPLUS
 DN 143:7605
 TI A preparation of azabicyclo[3.2.1]octane derivatives, useful as M3 muscarinic acetylcholine receptor antagonists
 IN Wan, Zehong; Yan, Hongxing; Palovich, Michael R.; Laine, Dramane I.; Lee, Dennis; Stavenger, Robert A.; Goodman, Krista B.; Hilfiker, Mark A.; Cui, Haifeng; Viet, Andrew W.; Marino, Joseph P.
 PA Glaxo Group Limited, UK
 SO PCT Int. Appl., 48 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005046586	A2	20050526	WO 2004-US36663	20041104
WO 2005046586	A3	20050728		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SV, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
EP 1682142	A2	20060726	EP 2004-810294	20041104
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, HR, IS			
JP 200751073	T	20070426	JP 2006-53963	20041104
US 2007129396	A1	20070607	US 2006-577834	20060501
US 2007270456	A1	20071122	US 2007-774885	20070709
PRAI US 2003-517243P	P	20031104		
WO 2004-US36663	W	20041104		
US 2006-577834	W	20060501		
OS CASREACT 143:7605; MARPAT 143:7605				

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The invention relates to a preparation of azabicyclo[3.2.1]octane derivs. of formula I-X- [wherein: X- is an anion; R1 is alkyl, alkenyl, alkylcycloalkyl, or alkyl-OMe, etc.; R2 is (cyclo)alkyl, heterocycloalkyl, or cycloalkylalkyl, etc.], useful as M3 muscarinic acetylcholine receptor antagonists (no biol. data). For instance, quaternary azabicyclo[3.2.1]octane derivative II-Br- was prepared via quaternization of N-methylazabicyclo[3.2.1]octane derivative III by cyclopropylmethyl bromide with a yield of 51%.

LI1 ANSWER 30 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:369242 CAPLUS
 DN 142:423890
 TI 8-Methyl-8-azabicyclo[3.2.1]octane derivative muscarinic acetylcholine receptor antagonists, their preparation, and their therapeutic use
 IN Palovich, Michael R.; Wan, Zehong; Zhu, Chongjie
 PA Glaxo Group Limited, UK
 SO PCT Int. Appl., 15 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005037224	A2	20050428	WO 2004-US34234	20041015
WO 2005037224	A3	20050623		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SV, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
AU 2004281167	A1	20050428	AU 2004-281167	20041015
CA 2542636	A1	20050428	CA 2004-2542636	20041015
EP 1677796	A2	20060712	EP 2004-795406	20041015
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, HR			
BR 2004015281	A	20061219	BR 2004-15281	20041015
CN 1897947	A	20070117	CN 2004-80038046	20041015
JP 2007509061	T	20070412	JP 2006-535384	20041015
IN 20060801989	JN	20070803	IN 2006-DN1989	20060412
US 2007135478	A1	20070614	US 2006-575837	20060412
KR 2007017965	A	20070213	KR 2006-707165	20060414
MX 2006PA04242	A	20060628	MX 2006-PA4242	20060417
NO 2006002071	A	20060508	NO 2006-2071	20060508
PRAI US 2003-512161P	P	20031017		
WO 2004-US34234	W	20041015		

OS MARPAT 142:423890
 AB 8-Methyl-8-azabicyclo[3.2.1]octane derivative muscarinic acetylcholine receptor antagonists are provided. Compound preparation is included. The compds. of the invention may be used to treat muscarinic acetylcholine receptor-mediated diseases.

LI1 ANSWER 29 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
 AN 2005:369284 CAPLUS
 DN 142:423884
 TI 8-Methyl-8-azabicyclo[3.2.1]octane derivative muscarinic acetylcholine receptor antagonists, their preparation, and their therapeutic use
 IN Busch-Petersen, Jakob; Palovich, Michael R.; Wan, Zehong; Yan, Hongxing; Zhu, Chongjie
 PA Glaxo Group Limited, UK
 SO PCT Int. Appl., 29 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005037280	A1	20050428	WO 2004-US33638	20041012
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SV, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
AU 2004281724	A1	20050428	AU 2004-281724	20041012
CA 2542657	A1	20050428	CA 2004-2542657	20041012
EP 1677795	A1	20060712	EP 2004-794886	20041012
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, HR			
BR 2004015361	A	20061212	BR 2004-15361	20041012
CN 1893948	A	20070110	CN 2004-80037266	20041012
JP 2007508390	T	20070405	JP 2006-535591	20041012
IN 20060801834	A	20070824	IN 2006-DN1834	20060404
AU 2007105895	A1	20070510	US 2006-575839	20060413
US 20071002	B2	20071002		
MX 2006PA04244	A	20060628	MX 2006-PA4244	20060417
NO 2006002042	A	20060508	NO 2006-2042	20060508
US 2007238752	A1	20071011	US 2007-766371	20070621
US 2007244150	A1	20071018	US 2007-766418	20070621
AU 2007203077	A1	20070719	AU 2007-203077	20070702
AU 2007203078	A1	20070719	AU 2007-203078	20070702
JP 2007272726	A	20071025	JP 2007-201718	20070802
PRAI US 2003-511009P	P	20031014		
AU 2004-281724	A3	20041012		
JP 2006-535591	A3	20041012		
WO 2004-US33638	W	20041012		
US 2006-575839	A1	20060413		
OS MARPAT 142:423894				
AB 8-Methyl-8-azabicyclo[3.2.1]octane derivative muscarinic acetylcholine receptor antagonists are provided. Compound preparation is included. Comps. of the invention may be used to treat muscarinic acetylcholine receptor-mediated diseases.				

RE CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

LI1 ANSWER 31 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:99356 CAPLUS
 DN 142:183482
 TI Muscarinic acetylcholine receptor antagonists
 IN Belmonte, Kristen E.; Busch-Petersen, Jakob; Laine, Dramane; Palovich, Michael R.
 PA Glaxo Group Limited, UK
 SO PCT Int. Appl., 19 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005009439	A1	20050203	WO 2004-US22947	20040716
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SV, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
AU 2004259232	A1	20050203	AU 2004-259232	20040716
CA 2532375	A1	20050203	CA 2004-2532375	20040716
EP 1648460	A1	20060426	EP 2004-778451	20040716
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, HR			
CN 1822838	A	20060823	CN 2004-8002649	20040716
BR 2004012716	A	20060926	BR 2004-12716	20040716
JP 2007523877	T	20070823	JP 2006-520377	20040716
IN 2006080074	A	20070824	IN 2006-DN74	20060104
MX 2006PA00662	A	20060330	MX 2006-PA662	20060117
US 2006178395	A1	20060810	US 2006-565046	20060117
NO 2006000775	A	20060411	NO 2006-775	20060217
PRAI US 2003-487981P	P	20030717		
WO 2004-US22947	W	20040716		
OS MARPAT 142:183482				
AB Muscarinic acetylcholine receptor antagonists, e.g., (3-endo)-3-(2,2-diphenylethonyl)-8,8-dimethyl-8-azobicyclo[3.2.1]octane bromide and methods of using them are provided. In addition a pharmaceutical composition for the treatment of muscarinic acetylcholine receptor-mediated diseases comprising the above compound is disclosed.				

RE CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 32 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
 AN 2005:99316 CAPLUS
 DN 142:183475
 TI Muscarinic acetylcholine receptor antagonists
 IN Belmonte, Kristen E.; Busch-Petersen, Jakob; Laine, Dramane; Palovich, Michael R.
 PA Glaxo Group Limited, UK
 SO PCT Int. Appl., 19 pp.
 CODEN: PIXX02
 DT Patent
 LA English
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005009362	A2	20050203	WO 2004-US23041	20040716
WO 2005009362	A3	20050407		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, ME, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2004259238	A1	20050203	AU 2004-259238	20040716
CA 2532433	A1	20050203	CA 2004-2532433	20040716
EP 1648461	A2	20060426	EP 2004-778509	20040716
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, LV, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, HR				
CN 1822839	A	20060823	CN 2004-80020652	20040716
BR 2004012537	A	20060919	BR 2004-12537	20040716
JP 2007525478	T	20070906	JP 2006-520387	20040716
IN 2006000077	A	20070824	IN 2006-DNT7	20060104
MX 2006040663	A	20060330	MX 2006-74663	20060117
US 2006178396	A1	20060810	US 2006-565048	20060117
NO 2006000777	A	20060411	NO 2006-777	20060217
PRAI US 2003-487982P	P	20030717		
WO 2004-US23041	W	20040716		
OS MARPAT 142:183475				
AB Muscarinic acetylcholine receptor antagonists, e.g., (3-endo)-3-(2-hydroxy-2,2-diphenylethyl)-8,8-dimethyl-8-azabicyclo[3.2.1]octane bromide and methods of using them are provided. In addition a pharmaceutical composition for the treatment of muscarinic acetylcholinereceptor-mediated diseases comprising the above compound is disclosed.				

L11 ANSWER 33 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
 AN 2005:96456 CAPLUS
 DN 142:183437
 TI Muscarinic acetylcholine receptor antagonists
 IN Belmonte, Kristen E.; Busch-Petersen, Jakob; Laine, Dramane; Palovich, Michael R.
 PA Glaxo Group Limited, UK
 SO PCT Int. Appl., 18 pp.
 CODEN: PIXX02
 DT Patent
 LA English
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005009440	A1	20050203	WO 2004-US23042	20040716
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, ME, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2004259239	A1	20050203	AU 2004-259239	20040716
CA 2532379	A1	20050203	CA 2004-2532379	20040716
EP 1648462	A1	20060426	EP 2004-778510	20040716
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, LV, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, HR				
CN 1822840	A	20060823	CN 2004-80020653	20040716
BR 2004012679	A	20061003	BR 2004-12679	20040716
IN 2006DN0080	A	20070824	IN 2006-DN80	20060104
MX 2006PA00664	A	20060330	MX 2006-PA664	20060117
US 2006160844	A1	20060720	US 2006-565049	20060117
NO 2006000776	A	20060411	NO 2006-776	20060217
PRAI US 2003-48801P	P	20030717		
WO 2004-US23042	W	20040716		
OS MARPAT 142:183437				
AB Muscarinic acetylcholine receptor antagonists, e.g., (3-endo)-3-(2-(2-diphenylethyl)-8,8-dimethyl-8-azabicyclo[3.2.1]octane bromide and methods of using them are provided. In addition a pharmaceutical composition for the treatment of muscarinic acetylcholinereceptor-mediated diseases comprising the above compound is disclosed.				
RE.CNT 2			THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD	
			ALL CITATIONS AVAILABLE IN THE RE FORMAT	

L11 ANSWER 34 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN
 AN 2004:902087 CAPLUS
 DN 141:379801
 TI A preparation of naphthalene-1,4-imine derivatives, useful as M3 muscarinic acetylcholine receptor antagonists
 IN Busch-Petersen, Jakob; Laine, Dramane; Palovich, Michael R.; McClelland, Brent W.
 PA Glaxo Group Limited, UK
 SO PCT Int. Appl., 24 pp.
 CODEN: PIXX02
 DT Patent
 LA English
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2004091482	A2	20041028	WO 2004-US10641	20040407
WO 2004091482	A3	20041223		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, ME, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
WO 2005095407	A1	20051013	WO 2004-US8027	20040317
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, ME, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
WO 2005094835	A1	20051013	WO 2004-US8032	20040317
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, ME, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1725564	A1	20061129	EP 2004-821846	20040317
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LI, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, LT, LV				
EP 1725241	A1	20061129	EP 2004-821848	20040317
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LI, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, LT, LV				
JP 2007529513	T	20071025	JP 2007-503877	20040317
JP 2007529514	T	20071025	JP 2007-503878	20040317
EP 1613307	A2	20060111	EP 2004-749817	20040407
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
JP 2006522161	T	20060928	JP 2006-509761	20040407
US 2006211758	A1	20060921	US 2005-552492	20051007

L11 ANSWER 34 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

US 7232841 B2 20070619
 US 2007149598 A1 20070628 US 2006-598882 20060914
 US 2007185088 A1 20070809 US 2006-598888 20060914
 PRAI US 2003-460860P P 20030407
 WO 2004-US8027 W 20040317
 WO 2004-US8032 W 20040317
 WO 2004-US10641 W 20040407
 OS MARPAT 141:379801
 GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The invention relates to a preparation of novel naphthalene-1,4-imine derivs. of formula I [wherein: R is H, halogen, alkyl, alkanoyl, or aryl; Y is alkyl, (CH2)2-(cyclohex-1,4-diyl), or CH2-(cyclohex-1,4-diyl)-CH2, etc.; Z is (CH2)2 or CH=CH; X is -O-Ar-O- or -O-L-O-; O is a bond, alkyl, or O-alkyl, etc.; Ar is (un)substituted Ph or 5-6-membered aromatic heterocyclic ring; L is a bond or (cyclo)alkyl], useful for the treatment of M3 muscarinic receptor antagonists (no biol. data). For instance, naphthalene-1,4-imine derivative II was prepared via amidation of 1,2-benzenediacetic acid by cyclohexylamine derivative III with a yield of 18% (example 1).

LII ANSWER 35 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2004:120688 CAPLUS

DN 140:181438

TI Preparation of piperidinylmethyl (thiazolyl)phenylcarbamates as M3

muscarinic acetylcholine receptor antagonists

IN Laine, Dramane I.; Bell, Ricahrd; Busch-Petersen, Jakob

; Palovich, Michael

PA Glaxo Group Limited, UK

SD PCT Int. Appl., 116 pp.

CODEN: PIXX02

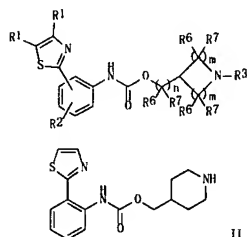
DT Patent

LA English

FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
P1 WO 2004012684	A2	20040212	WO 2003-US24569	20030806
WO 2004012684	A3	20040624		
W: AE, AG, AL, AU, BA, BB, BR, BZ, CA, CN, CO, CR, CU, DM, DZ, EC, GD, GE, HR, HU, ID, IL, IN, IS, JP, KP, KR, LC, LK, LR, LT, LV, MA, MC, MK, MN, MX, NO, NZ, OM, PH, PL, RO, SC, SG, TN, TT, UA, US, UZ, VN, YU, ZA				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003261392	A1	20040223	AU 2003-261392	20030806
EP 1549278	A2	20050706	EP 2003-767232	20030806
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2006505517	T	20060216	JP 2004-526043	20030806
US 2005277676	A1	20051215	US 2005-523478	20050204
PRAI US 2002-401756P	P	20020806		
WO 2003-US24569	W	20030806		
OS MARPAT 140:181438				
GI				

LII ANSWER 35 OF 35 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
alkyl, aryl, halogen, alkoxy; R3 = H, (cyclo)alkyl, alkenyl, alkenylaryl, (un)substituted alkylaryl, cycloalkylalkyl; R6, R7 = independently H, alkyl; or R6 and R7 together form an (un)substituted (hetero)cyclic ring; n = 1-2; m = 1-2 were prepd. For example, reaction of tert-Bu 4-[[[(2-bromophenyl)amino]carbonyloxy]methyl]piperidine-1-carboxylate with bis(pinacolato)diboron, followed by coupling reaction with 2-bromothiazole and deprotection with CF3CO2H, afford II-CF3CO2H. Thus, I and their pharmaceutical compns. are useful as M3 muscarinic acetylcholine receptor antagonists for the treatment of chronic obstructive lung disease, chronic bronchitis, asthma, chronic respiratory obstruction, pulmonary fibrosis, pulmonary emphysema, and allergic rhinitis, irritable bowel syndrome, spasmodic colitis, gastroduodenal ulcers, gastrointestinal convulsions or hyperreflexia, diverticulitis, pain accompanying spasms of gastrointestinal smooth musculature; urinary-tract disorders accompanying micturition disorders, neurogenic pollakiuria, neurogenic bladder, nocturnal enuresis, psychosomatic bladder, incontinence assocd. with bladder spasms or chronic cystitis, urinary urgency or pollakiuria, and motion sickness (no data).



AB Title compds. I [wherein R1 = halogen, alkyl, CH2F, CHF2; R2 = H, OH,

=> d his full

(FILE 'HOME' ENTERED AT 13:41:00 ON 29 NOV 2007)

FILE 'REGISTRY' ENTERED AT 13:41:10 ON 29 NOV 2007

L1 STRUCTURE UPLOADED

D

L2 0 SEA SSS SAM L1

L3 60 SEA SSS FUL L1

FILE 'CAPLUS' ENTERED AT 13:41:40 ON 29 NOV 2007

L4 23 SEA ABB=ON PLU=ON L3

D QUE L4 STAT

D 1-23 IBIB IABS HITSTR

E BUSCH PETERSEN JAKOB/AU

L5 51 SEA ABB=ON PLU=ON ("BUSCH PETERSEN J"/AU OR "BUSCH PETERSEN JAKOB"/AU)

E COOPER ANTHONY W/AU

L6 18 SEA ABB=ON PLU=ON ("COOPER ANTHONY W J"/AU OR "COOPER ANTHONY WILLIAM JAMES"/AU)

E LAINE DRAMANE/AU

L7 35 SEA ABB=ON PLU=ON ("LAINE DRAMANE"/AU OR "LAINE DRAMANE I"/AU OR "LAINE DRAMANE IBRAHIM"/AU)

E MCCLELAND BRENT/AU

L8 18 SEA ABB=ON PLU=ON ("MCCLELAND BRENT"/AU OR "MCCLELAND BRENT W"/AU)

E PALOVICH MICHAEL/AU

L9 63 SEA ABB=ON PLU=ON ("PALOVICH MICHAEL"/AU OR "PALOVICH MICHAEL R"/AU OR "PALOVICH MICHAEL ROBERT"/AU)

L10 120 SEA ABB=ON PLU=ON L5 OR L6 OR L7 OR L8 OR L9

L11 35 SEA ABB=ON PLU=ON L10 AND MUSCARINIC

D QUE L11 STAT

D 1-35 BIB ABS

FILE HOME

FILE REGISTRY

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 28 NOV 2007 HIGHEST RN 956214-95-2

DICTIONARY FILE UPDATES: 28 NOV 2007 HIGHEST RN 956214-95-2

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

FILE CAPLUS

Copyright of the articles to which records in this database refer is

held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 29 Nov 2007 VOL 147 ISS 23
FILE LAST UPDATED: 28 Nov 2007 (20071128/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/infopolicy.html>

=> log h

COST IN U. S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

248.30

420.61

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

-45.24

-45.24

SESSION WILL BE HELD FOR 120 MINUTES

STN INTERNATIONAL SESSION SUSPENDED AT 13:49:30 ON 29 NOV 2007